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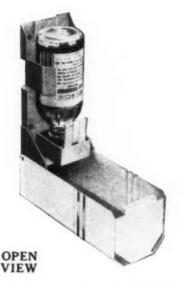
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CABINET WITH BOTTLE



CLOSED VIEW

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Splendid Sales Potential
You will realize these facts...
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Delivered ready to use, it is dispensed by evaporation directly from the bottle which is placed in an attractive metal wall unit. Unit is small and of modern design with chrome strip trim. It blends in with every color scheme. Ingenious interior construction permits individual control of the rate of evaporation so that just the right amount of liquid is dispensed into the air. Standard construction includes a well-type evaporating compartment. Completely automatic. Cannot drip . . . cannot leak . . . bottle cannot spill. The refilling operation takes but a jiffy . . . no mess, no fuss . . . just remove empty bottle, transfer special cap, and insert new full bottle. Exclusive adjustable "wick-in-well" construction makes this dispenser the most satisfactory unit available. Evaporation is accomplished two ways . . . direct from evaporation dish and also from adjustable wick which permits instant and positive control of rate of evaporation depending on area and strength of odors to be neutralized.

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Volume XXVI Number 5 May 1950

and SANITARY CHEMICALS

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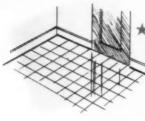
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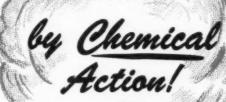
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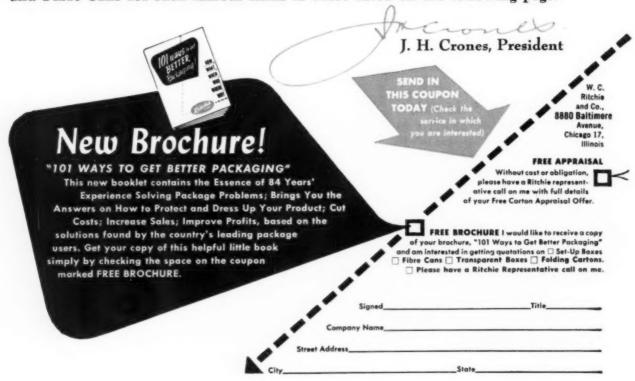
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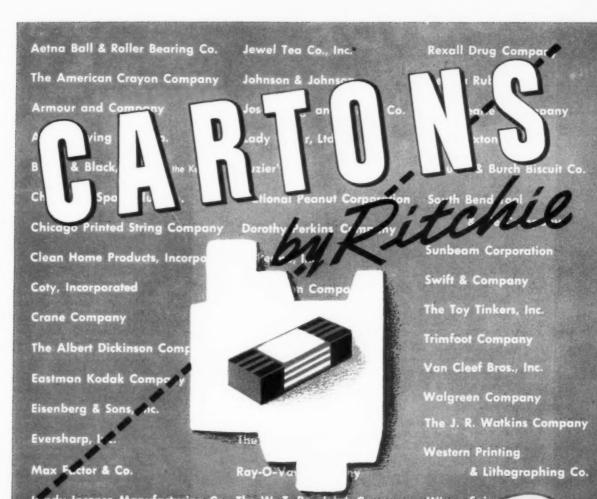
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A GUIDE TO WAX PRODUCTS PURCHASING FOR PRIVATE BRAND RESALE



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Candy's DeLuxe-Bright Beauty

Four floor waxes that are all-around top quality for any given traffic condition. Each imparts the finest protection and beauty to floors for which they are best suited.

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Really cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive quality, it frees almost every surface from all forms of foreign matter to perfection.

An honest appraisal of floor wax products as we see it is offered to guide wax buyers who want the best quality money can buy...

1. BEAUTY AND DURABILITY

should be considered together. Initial appearance is important, but for a waxed surface to remain beautiful it must be durable. Durability depends not only on resistance to the abrasion of traffic, but even more so an resistance to the collection of dirt and to discoloring traffic marks. Durability is really measured by how long the waxed surface maintains a nice appearance before the necessity of complete removal and re-waxing.

2. ANTI SLIP

qualities are necessary in a good wax as a matter of safety underfoot. This important quality does not necessarily require the sacrifice of beauty and protection which are the foremost original reasons for the use of a wax. Look for the proper balance—a wax film which is not excessively slippery yet which is not tacky and does not excessively collect dirt.

3. WATER RESISTANCE

is important, particularly when considering the possibility of wet traffic and the necessity for frequent damp mopping for the purpose of removing surface dirt. Overdoing this quality mean greater difficulty in applying multiple coats or wax and may seriously increase the difficulty in removal when complete cleaning and re-waxing is necessary. Water resistance is important, but so is the quality of removability.

4. SOLID CONTENT

when expressed in percentage is not nearly a important as the quality of the solid content. When considering good quality, 12% of solid answers most needs for good planned maintenance programs. Two applications of 12% will give better results than one of 18%. However the more concentrated material is useful for som programs of maintenance and particularly or "washed-out" floors, etc. Over-waxing should be avoided so that periodic complete removal was not be too difficult.

5. CARNAUBA WAX

is still the most important basic ingredient in or floor waxes. When refined and compounded with other important ingredients and "KNOW HOW it aids materially in producing the most importal features of a good floor wax...ALL AROUN QUALITY OF PERFORMANCE.

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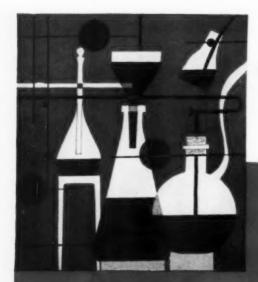
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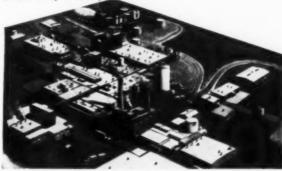
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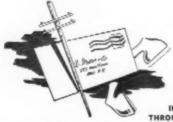
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SPECIFICATIONS

Titre °C	25-30
Color Gardner 1933	2-4
Color Gardner 1933-After	
Heat Test to 500° F	4-7
Unsaponifiable %	0.3-1.5
Saponification Value	198-202
Acid Value	197-201
lodine Value	125-135

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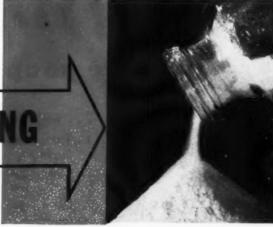
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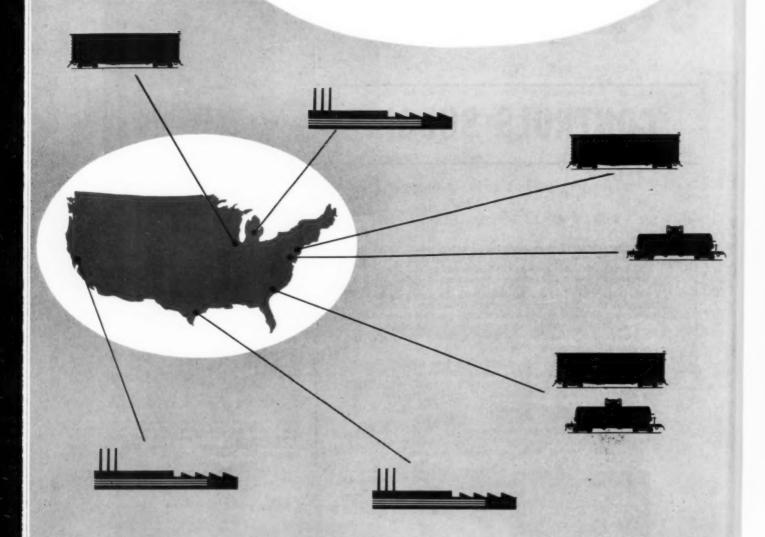
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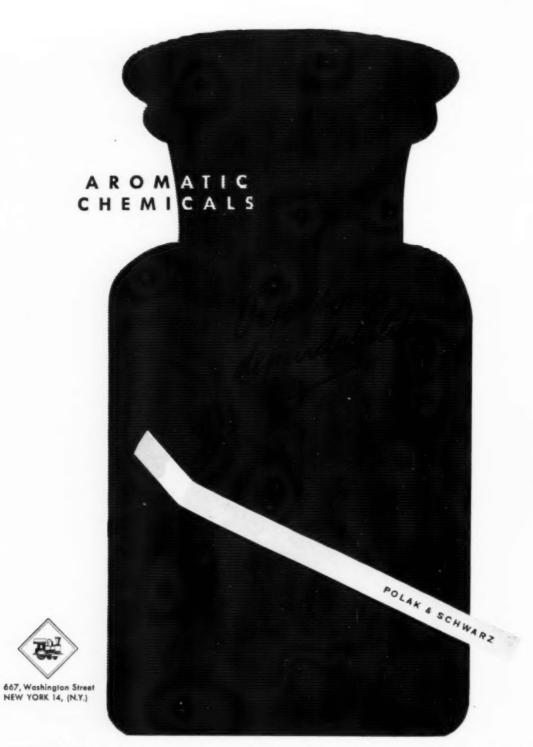


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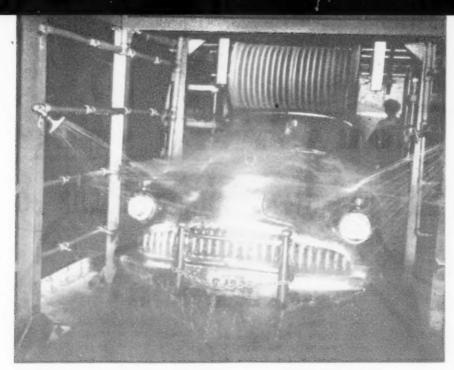
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Chapter 4— SOAP PRODUCTS — Every known type of soap is described, considering raw materials, manufacture, characteristics, uses, etc.

Chapter 5—PERFUMING & COLORING SOAP—Action of soap or alkali, light and air on some of the common aromatics. Classification of perfumes.

Chapter 6—GLYCERINE RECOVERY AND REFINING—Recovery methods for glycerine. Continuous glycerine distillation. Fat splitting methods, fatty acids distillation and refining, and allied processes.

Chapter 7—SYNTHETIC DETERGENTS— Alcohol sulfates, alkyl aryl sulfates, alkyl sulfonates, sulfated sulfonated amides, esters, and amines. Evaluation and classification of the detergents.

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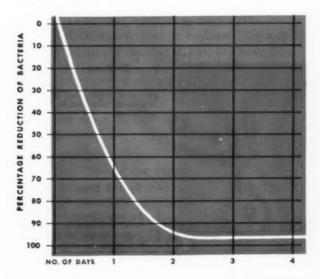
Tests show reduction of skin bacteria on hands with 44 DYS EPT? Containing hexachlorophene

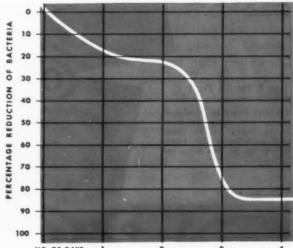
This new liquid soap perfectly meets the needs of surgeons, physicians, hospitals, clinics, restaurants—any application where it's important to maintain skin bacterial population at a minimum level. Independent laboratory

tests demonstrate that convenient "DYSEPT" —with 5% hexachlorophene to the anhydrous soap content—is both bactericidal and bacteriostatic with continuous daily use. Charts show percentage reduction.

CHART No. 1. Percentage reduction in resident bacteria on hands with continuous daily use of undiluted "DYSEPT" for 4 consecutive days. Tests actually ran over 5-day period. "Zero" days represents bacterial population before use of "DYSEPT."

CHART No. 2. Percentage reduction in resident bacteria on hands with continuous daily use of "DYSEPT" diluted 1:1 with water for 4 consecutive days. Again, tests actually ran over 5-day period. "Zero" days represents bacterial population before use of "DYSEPT."





NOTE THESE FACTS ABOUT THE USE OF "DYSEPT"

"DYSEPT," containing 1% hexachlorophene to the total volume, leaves an invisible film not removed by rinsing which, with application one to three times daily for at least five days a week, reduces bacterial skin flora to about 5% of the usual amount and maintains that level. It has been found to reduce surgical scrub-up contact time with daily use. "DYSEPT" is non-toxic and non-irritating, and acts effectively even when diluted with water. A clinical brochure, with laboratory reports, suggestions for using and other technical data, may be obtained by mailing the coupon. "DYSEPT" is available through all Davies-Young distributors.

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For toilet soap cakes of unusual shape, oval cakes, or cakes having highly convex faces, with or without side band. Speeds up to 100 cakes per minute.



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For small toilet soap cakes with side band. Speeds up to 120 cakes per minute.

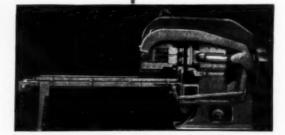
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AS THE SEES IT

SERIES of not exactly breathtaking observations on soaps and detergents are included in a report just issued by the U. S. Senate Committee on Agriculture and Forestry. The report traces back to the hearings held last year by the committee headed by Senator Gillette of Iowa to investigate the possibilities of expanding uses of farm crops, specifically where soapers are concerned, an increased use of tallow and grease in the soap and detergent field.

The report hits a little wide of the mark in several spots. Take, for example, the comment that "an independent soap manufacturer stated that the three major soap companies were advertising the independents out of business." To soapers, that has an old familiar flavor. We have been hearing the same charge for years, but the "independents" seem to go right on doing business at the old stand. Specifically which companies, we should like to ask Senator Gillette, have been put out of business?

In another section of the report we find the threat that "should the foreign countries let up in their buying of coconut oils and let the price return to anywhere near the domestic price of fats and oils, the floodgates would be opened wide to the importation of an endless number of tropical and marine oils." Sounds to us like another version of that alligator story that has been going the rounds. We can thank the foreign buyers for taking the coconut oil, for if they didn't we would be up to our teeth in it. But not at these prices, Senator! With coconut oil at sixteen cents plus tax and tallow under seven cents, we fancy it is going to be quite some time before soap makers use a pound more coconut oil in their kettles than the minimum they can get by with.

Admittedly senators and congressmen must do things to impress the folks back home. In recent years, one of their favorite pastimes has been to investigate something,—preferably the "greedy commercial interests" which are apparently always, like in the "westerns," trying to take ad-

vantage of Little Nell, the rancher's virtuous daughter. Now that this particular investigation has been terminated with publication of the committee's report and recommendation of new legislation, which seems to be the standard procedure, the committee members again are free to busy themselves pursuing some new ogre.



UPPLEMENTING our thoughts of last month on the subject of synthetic detergent odors and the necessity of covering them where they are unpleasant, particularly in products sold in the small-package household market, we observe with interest parallel circumstances in the case of scouring powders. During the past year, a trend toward light perfuming of household scouring powders has been noted. Early in 1949, one manufacturer with a well-known product in this field added a perfuming agent to cover what previously had been a not too pleasant odor when wet.

Reports indicate that sales moved up sharply following sampling of the new perfumed material, and what is more important, held at the higher level. In the meantime, a few competitive products have followed suit. Whether any material improvement in sales has been noted by these latter is not known to us, although we suspect that the change could not avoid being a help marketwise.

These more recent improvements in some cleansers emphasize that numerous other products on the market have not kept pace with progress. If sales are down, manufacturers are prone to blame the loss on "market conditions." The same product has sold well for twenty years, hasn't it? So why shouldn't it continue to sell? Too often this is a handy refuge for the lazy marketer until his hand is forced by competition. And it might have a bearing in the scouring powder market today, particularly in this matter of unpleasant odor.

ONTROVERSY over "no-rinse" detergents grows more heated. Criticism has expanded from the psychological stage to the scientific. The American Institute of Laundering which has been investigating "no-rinse" detergents for some time past came to the conclusion that soil is not properly removed without rinsing, and what is even more significant, the bacteria count in unrinsed clothes was sharply higher than in cases where they were rinsed under comparable conditions.

In the mid-west, a well-known soaper has been advertising his laundry soap powder with some rather telling shots at the "no-rinse" products. He offers a quick home test method to show that without rinsing much of the soil remains in the washed clothing. But, he then commits something of an advertising sin himself by stating "no synthetics . . . no harsh chemicals." Obviously, the implication is that synthetic detergents are "harsh chemicals," which is not true.

Now, we understand, the announcement of "no-rinse" soaps is imminent. Not to be outdone by the original no-rinsers, we have a feeling that somebody plans to become sublimely ridiculous. It could be. Maybe a few hard-headed scientific men in and around the soap industry should sit in on these advertising plans before everybody goes off the deep end.



HAT the insatiable craving for publicity among Americans has taken on the proportions of a national curse, we have long believed and pointed out before. This was brought home to us once again last month by the rather rough going-over which Fortune gave Charles Luckman, former Lever president. The shameless build-up which one Sonnenberg, the high-powered publicity agent, gave to Mr. Luckman and to certain of Lever's affairs, according to Fortune, developed into something of an enigmatical situation. It seems that the publicity made the grade, but that its subject, Mr. Luckman, did not. At least that is the way we read it in the article.

Now, to leave this Luckman-Sonnenberg business, which recalled to us again the whole unpleasant subject of publicity, we return to a glimpse of our editorial desk as each mail comes in. Reams of so-called publicity releases, of so-called "news of importance to our readers,"—stories about machines, about products, and build-ups for people, some with pictures, some without,—some of it actual news, but most of it just plain slush. We knock out four business magazines a month in this shop, so you can imagine the pile of stuff which comes in. Plenty of it is a bald bid for free advertising. Ninety per cent of it never gets by the nearest waste basket. If such were not the case, we would have room to publish little else.

Once we heard a remark about a publicity hound to the effect that he would shoot his mother to get his picture in the papers. That no end of people will stoop to trickery and bootlicking to gain what they consider "recognition" in the public prints is obvious every day. Publicity stunts to make "news" are staged with nauseating regularity. Facts are twisted and warped and credibility always a question. Which is faked and which is true? All of which stems from that apparently ever growing and insatiable demand for publicity of one sort or another, some for personal fame or glory, other for more commercial reasons, mostly to sell something. Is this endless flood of tripe ever to cease?



HEN a manufacturer brands his product with a tricky trade name, he often does himself a disservice and sometimes beclouds the identity of his product as well. This is particularly true if a supplier offers three or four grades of several types of products which find somewhat similar uses. For example, we have in mind at the moment liquid, paste and powdered hand soaps for industrial uses. Possibly ten or twelve different products in this general category may be supplied by one manufacturer, some for mild hand cleaning and others for medium and heavy duty. Each may have its own tricky name, bearing no relation to other hand cleaners of the same manufacturer. Multiply this by a dozen other suppliers each trying to sell the same account with their list of tricky-named products, and in our opinion it all spells confusion. The odds are probably ten to one that the

(Turn to Page 153)



YNTHETIC detergents in the U. K. are normally marketed to the public in appropriately diluted form, either as powders or liquids-or, less popularly, as bars or tablets. The two chief sales outlets are to be found in the allied fields of soap and cosmetics. Probably the lines selling most widely are two or three expertly prepared synthetic detergent powders. These are intended for the washing of fabrics, dishes and for similar household uses. Though some are made by soap firms, synthetic detergents are usually claimed to be superior to soap powders for these purposes: or, at least, the advertisements hint as much. How far this policy is dictated by the soap shortage is difficult to say: the publicity men are, however, sufficiently wideawake to stress the advantages of soap substitutes without inviting comparisons that may later

prove odious. On the other hand, more forthright claims are made by firms who have no soapmaking interests to take into account. The future picture, as seen through the eyes of the consumer, is therefore impossible to predict.

The non-soapmaking firms sponsor, in general, the lower grades of synthetic detergent powders and the more concentrated detergent liquids.

On the cosmetic side, there is a wide sale for liquid soapless shampoos, with a more restricted but nevertheless lively demand for soapless shampoo powders. Synthetic detergents in paste, powder and liquid form are used as required in shampoo creams, tooth pastes, bubble baths, antiseptics, etc.

There are, of course, official restrictions on the sale of synthetic detergent preparations as soap substitutes. The U. K. Ministry of Food has briefly summarized the position in the following terms:

"No license is required to manufacture a soap substitute, but if the product is labelled for sale, a license becomes necessary. Sales in bulk are regarded as sales by retail if the product is labelled.

"Certain standards have been laid down by this Ministry after consultations with representatives of the trade, as to what constitutes a worthy soap substitute, and these are briefly as follows:

"Products which are claimed to be suitable for general household use, including the washing of woolens and delicate fabrics, should contain not less than seven to eight per cent concentrated active detergent in the form of some sulphated material, such as sulfonated fatty alcohol, or similar ingredient, and not more than 30 per cent of strong alkali. The pH value of such products should not exceed 10.2.

"Products which are claimed to be suitable as general household cleansers will be accepted by the Ministry if they contain not less than five per cent concentrated active sulfonated material, provided that the label disclaims use for the washing of fabrics other than linen and white cotton goods.

"Products which are claimed as suitable for dishwashing and scrubbing only will be considered provided the active detergent content is not less than 2.5 per cent."

The Basic Detergents

THERE are of course many ways of classifying synthetic detergents. They may be considered historically (soap → turkey red oils → sulfated fatty alcohols, etc.) or according to their physical or chemical characteristics; or, again, they can be classed according to origin or to performance under specific conditions.

Commercially speaking, the most widely used synthetic detergents in the U. K., at the time of writing, are the sulfated fatty alcohols and, in particular, the secondary alkyl sulfates derived from petroleum. The future also looks bright for the alkyl aryl sulfonates. Among the remaining products on the market, mention should be made of certain fatty acid condensates, non-ionic polyethylene oxide condensates, sulfated amides, alkyl sulfonates and, of course, the various sulfonated oils and specialized products of similar character. According to Chemical Industries (811, 61, 1947) the approximate production figures for alkyl sulfates and aryl alkyl sulfates in the U.S.A. are respectively in the region of 20 and 50 per cent: in the U. K. at present the higher figure would apply to the sulfated fatty alcohols-but the market is by no means static. Probably 10 per cent or so of current requirements is catered to by unspecified mixtures of different detergents and diluents: this figure a while back was considerably higher, but industrial purchasers are

daily becoming more discriminating.

One of the most widely known and used of synthetic detergents in the U. K. is Shell Chemical's "Teepol." Chemically based on sodium higher (secondary) alkyl sulfates, derived from the olefinic residues of crude oil refining, this is an amber liquid, soluble in water of any degree of hardness, to give clear solutions, stable over a wide range of pH values.

"Teepol," with a characteristic and persistent odor that is by no means easy to cover, has proved extremely popular as a base for soapless shampoos. It is also used in liquid detergents, polishes and glass cleaners, etc. In powder form, it finds considerable application in synthetic detergent powders for household purposes, while another derivative, pasted up with salts, is being increasingly used in textile scouring and other industrial applications.

Sodium lauryl sulfate, of the type sulfonated lorol, still deservedly attains a widespread and popular demand. The only fatty alcohols available for sulfation up to 1939 were the primary fatty alcohols, i.e., the straight chain higher aliphatic alcohols of the formula R.CH.OH. These consisted mainly of lauryl, cetyl, stearyl and oleyl alcohols. All these could be produced by highly specialized hydrogenation processes from the corresponding fatty acids and the last three could also be obtained by the splitting of sperm oil. They were commercially never available as individually pure chemical entities, but as homologous mixtures. The corresponding S.F.A.s were therefore sulfated primary fatty alcohols. This family of chemical compounds had general standard characteristics and also the normal variations, sometimes small, sometimes large, between different members of a chemical family such as one gets in all homologous groups. Sulfated cetyl alcohol filled certain requirements, but of all this group the sulfated lauryl alcohol was, and remains, supreme as an all-round wetting and foaming agent and detergent.

Probably superior in wettingout but inferior in foam-production is the secondary fatty alcohol type pre-

viously referred to (the type of general formula R1CH(OH)R2, in which the sulfate group does not become attached to the end of the chain). As I have pointed out on several occasions in the past, the term "lauryl" connotes only the primary or straight chain fatty acid with 12 carbon atoms, whereas the term "dodecyl" can and is more loosely used to refer both to the primary and the secondary C12 alcohols. To call the secondary dodecy! alcohol "lauryl alcohol" or to call the secondary S.F.A. made from secondary dodecyl alcohol "sulfated (or sulfonated) lauryl alcohol" is incorrect and grossly misleading.

A further word of advice to consumers: in all cases, whether primary or secondary S.F.A.s are employed, potential users should ask what is the effective strength. Here again they should be careful, because there are two different ways of expressing this. One way is to speak of the fatty alcohol content and the second is to speak of the sulfated fatty alcohol content. The former is the more easily ascertainable by analysis and is obtained by an analytical method which, in fact, splits the S.F.A. back into the free original F.A. The arithmetical ratio between S.F.A. content and the F.A. content as determined by analysis is very roughly in the ratio of 1.5:1. For example, if a commercial S.F.A. is shown to have a fatty alcohol content of 30 per cent it will correspond roughly to 45 per cent S.F.A. content. It does not matter which the consumer asks for, so long as he makes quite sure he is given the figure for which he asks. Obviously, if he asks for F.A. content and is given the S.F.A. content, he is going to be deceived. He should beware of any other way of giving him figures. I have seen one S.F.A. with a specification of total solid content. As all commercial S.F.A.s contain greater or smaller quantities of sodium sulfate, it is obvious that the solid content includes the sodium sulfate and a commercial S.F.A. quite poor in true S.F.A. content could be given by this method of description an extraordinarily high solid content!

Alkyl aryl sulfonates, like the

secondary alkyl sulfates, are derived from petroleum and like the latter are marketed as 30 to 40 per cent "active content" materials, extended with sodium sulfate, phosphates, etc. Those of the dodecyl benzene sulfonate and some of the alkyl naphthalene sulfonate type are of outstanding importance. One member of this group appears to be the basis of a well-known British soap substitute in powder form. Similar alkyl aryl detergents of the "Igepal NA" type were made in Germany during the war from brown coal derivatives. The American "Nacconol NR," "Kreelon 4D" and "Santomerse No. 1" belong also to this group.

The Imperial Chemical Industries product, "Lissapol N" has, like "Teepol," proved its utility as a detergent for textiles. It is a co-polymer of ethylene oxide and some other body, possibly a chlorphenol, made by polymerizing under pressure. Very stable, excellent for dishwashing and the cleaning of clothes, carpets, windows, etc., it is of course non-ionic. It works well when in solution with soda ash and sodium chloride (equal parts of these being superior to one or the other used alone). The German "Igepals" and "Emulphors O" and "A" and the U. S. detergents, "Glim" and "Triton X-100," have also been described as ethylene oxide condensates.

In some finished preparations, mixtures of the various anionic detergents mentioned in the preceding paragraphs are used. Other additives include soap (though this is only advisable in special cases) and certain of the non-ionic surface-active agents; together with methyl and methoxy cellulose derivatives, salts such as sodium sulfate and bicarbonate, phosphates, silicates, clays and diatomaceous earths, solvents and so on. The sodium carboxymethyl cellulose derivatives are particularly useful in certain formulations, owing to their protective colloidal action and suspending power for dirt.

Synthetics and Soap

THE disadvantages of soap are well known—perhaps too well known in comparison with those of the various synthetic detergents. Soaps made from a wide range of fats or fatty acid mixtures are noted, as a class, for their good wetting and emulsifying properties and for their excellent, allround detergent action. On the other hand, they cannot act in acid solution and possess obvious disabilities in hard water. The first of the soap substitutes, the sulfonated oils, proved their utility in a variety of applications, but cannot-even in their most improved forms-be acclaimed as effective detergents: they nevertheless may fulfill useful secondary roles in the formulation of specific preparations for the domestic market.

When selecting a synthetic detergent, considerable caution, and often a good deal of patient experimentation, are required, in order to insure optimum performance at the desired economic level. Some synthetics are good detergents but lack foaming properties; others exhibit the opposite characteristics. Some used successfully in textile washing operations are not nearly so effective for domestic laundering. Still others are unattractive in appearance, hard on sensitive skins, possess somewhat offensive odors, exhibit undesirable incompatibilities or instabilities, etc. The problem of dealing with "phoney" or adulterated synthetics has already been mentioned.

The chemist entrusted with developing a preparation based on synthetic detergents will naturally obtain all the samples, with prices, that he can accumulate. He will then carry out performance tests under actual working conditions. Evaluation is facilitated, moreover, by determining surface and interfacial tensions; stability to hard water, acid and alkaline solutions; wetting and foaming power; lime soap dispersing action, and so forth. The American Society for Testing Materials is one of the recognized bodies interested in devising such standard tests for surface-active agents. There is considerable literature on the qualitative detection and quantitative determination of synthetic detergents present in admixture: the chemist interested in examining preparations already on the market will find such papers as L. F. Hoyt's "A Qualitative Method for Detecting Surface Active Agents" (J.A.O.C.S.,

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TABLE I. Analyses of British Synthetic Detergent Powders

	General Characteristics*	Bulking Capacity cc. per 100 g.	Type & Quantity of Synthetic Detergent	Sodium sulfate	Sodium Carbonate	Sodium Phosphate	Moisture
Product A	Creamy white powder pleasantly perfumed	340	Alkyaryl sulfonate 22.8†	44.0	3.0 (actually bicarbonate)	20.9	9.5
Product B	Fine white powder, light	320	Sodium alkyl sulfate 21.5	50.8	7.8	movino.	18.2
Product C	Fine white powder, dense	132	Sodium alkyl sulfate 2.9	22.4	47.8	_	27.8
Product D	Fine white powder medium light	240	Sodium alkyl sulfate 6.9	88.0	-	-	5.4

^{*} Further characteristics are summarized in the text of this article.

† Figures in column 4-8 are percentages of the total weight.



Household

T IS HARD to picture a well run household that does not include a scouring product among its cleaning supplies. Indeed, in many homes, it will be found that there is more than one type of abrasive cleaner in regular use.

In the 1948 survey (1) of the Greater Milwaukee Market, it was found that 94.5 per cent of the families in this typical city were buyers of powdered scouring cleansers. In addition it was found that 68.3 per cent also used metallic scouring cleansers. In view of the potential of such a market it is not surprising that scouring cleansers have come in for revamping with respect to improved cleansing properties and more attractive packages (2). As a matter of fact, one well known scouring powder has become so outstanding as to rate a nomination (3) for packaging's "Hall of Fame."

While the search continues for the elusive "all purpose" product, abrasive cleaners have become more specialized. For example, there are preparations that are more or less specifically designed for use on glass (4), while others are intended for cleaning painted surfaces (5). Nonetheless, there remains a large group of "general-use" products which retain the dominant position among scouring cleansers. These are provided as powders, pastes, bars or cakes and as metallic and non-metallic scouring pads.

As was pointed out in a previous discussion (6) and as is shown in recent consumer su. veys (1), scouring powders are by far the most important of these abrasive cleaners. During the years since they were introduced it has become evident that, while they are highly useful products, there are certain limitations to the employment of the powders. It has been pointed (7) out that the ordinary scouring powder was designed principally to clean and polish metal cooking utensils in the home kitchen. It is unfortunate that scouring powder is often used incorrectly, and generally against the manufacturer's recommendations, for use on porcelain sinks, bathtubs, painted woodwork, and even linoleum. In passing it may be noted that some labels actually suggest the use of the powder on linoleum, as well as on pots and pans.

Over the years, however, certain standards have been accepted generally and various specifications have been developed. Indicative is the statement appearing in a frequently-consulted consumer publication (8). This is to the effect that scouring powders should be abrasive enough to do a good cleaning job, yet be soft enough

not to scratch the surface on which they are used. It is pointed out that scouring powders are not suitable for use on painted, varnished or enameled surfaces, nor on linoleum or oilcloth, plated or polished metalware, glass, aluminum pans, or tinned ware.

Good Scouring Powder Defined

IN DISCUSSING formulation, Smith (9) has said that the main requirements of a good scouring powder may be summarized as follows: (a) It should be white in color and free-flowing; (b) the abrasive action of the powder must be such as to produce uniform and easy removal of surface dirt without scratching; (c) the grease-cutting properties of the powder should be of a high order, and (d) the detergent ability of the product must be of a high quality. Pertinent, too, is the suggestion by Vallance (10) that an ideal scouring powder should contain a very fine abrasive, together with a detergent such as soap and a sequestering agent like sodium hexametaphosphate or tetrasodium pyrophosphate. A small quantity of alkali is desirable to assist in fat removal.

More specific are the requirements for a general purpose scouring powder (Type III-soap scouring compound) as given in Federal Specification P-P-591a. In such a product, the volatile matter should not exceed six per cent. The proportion of carbonated alkali, calculated as sodium carbonate, may range between six and 20 per cent. The proportion of anhydrous soap, active anhydrous salt-free synthetic detergent, or a combination of the two, must not be less than three per cent nor more than 10 per cent. Insoluble siliceous material should not be less than 60 per cent nor more than 90 per cent. This abrasive material should not yield more than one per cent of residue retained on a No. 60 sieve and not more than 10 per cent of residue on a No. 80 sieve.

The raw material ratios as given

Scouring Cleansers By Milton A. Lesser

in the Federal Specification may be compared with the data provided in the new text by Thomssen and Mc-Cutcheon (11). Here it is stated that the average composition consists of four to 10 per cent of detergent, 80 to 90 per cent of abrasive, and one to 10 per cent of sodium carbonate; the balance being moisture.

Obviously, the abrasive comprises the most important ingredient of scouring powders. Upon its qualities depend, to a large extent, the characteristics of the product and its range of utility. It is understandable the way experts stress the importance of using carefully selected abrasives that are standardized with respect to uniformity, particle size and degree of hardness. Vallance (12), for one, feels that correct identification, testing and standardization of abrasives should be routine laboratory procedure in organizations specializing in scouring powder production.

Types of Abrasives

THE formulators of various types of abrasive powders have the following agents to choose from; the materials being arranged in increasing order of hardness: talc, diatomaceous earth, whiting, marble, volcanic ash (pumicite), feldspar, pumice, silica (silex) and sand. Of course, some of these materials are too soft and others too hard for use in the type of scouring powder under consideration. Soft abrasives cannot do an efficient scouring job in such products, while materials that are too hard will scratch or mar the surface being cleaned.

As noted by one worker (13),

some form of volcanic ash is the material most commonly employed to provide a powder of intermediate abrasive action, one that conforms to what the housewife is accustomed. Large deposits of this material are found in the United States (14). It is reported (3) that the first household cleanser marketed in convenient powder form consisted essentially of selected volcanic ash and a grease-dissolving agent. In many cases, feldspar or silex, ground to a fineness of 100mesh or more, are favored because they produce a whiter product (11). John (15) mentions that China clay is a useful addition to scouring powde.s because it acts as a valuable link between the soap and scouring agent.

From time to time, suggestions have been made for improving the qualities of abrasives or to modify their characteristics so as to produce better scouring powders. Some years ago, for example, Cummins (16) suggested the use of a calcined form of diatomaceous earth as a replacement for the feldspar, quartz or pumicite commonly used. The calcined material, he claimed, yielded an abrasive with the proper cleansing action but without scratching effects. The abrasive could be mixed with soap and an adjunct material like sodium carbonate, sodium borate, sodium silicate or trisodium phosphate.

Much more recently, Moran (17) reported that scouring powders and other cleansing compositions could be prepared by mixing:

		per cent
Soap		10-40
Ground	silica	20-70

Made in powder, paste and bar form, household cleansers are composed mainly of an abrasive, alkali, soap or synthetic detergent, with the latter finding greater usage in recent years. Titanium dioxide 10-20

The titanium dioxide, a waterdispersible form having a high absorption capacity for oil and for water, is said to promote foaming and to inhibit undesired abrasion by the ground silica.

CMC in Scouring Powders

ATE in 1949, Bacon and Vaughn L(18) were granted a patent on processes for making abrasive scouring powders containing sodium carboxymethylcellulose. This material, commonly known as CMC, was said to control, or to inhibit to a desired extent, the abradent action of the abrasive ingredients and thereby extend the usefulness of the products. Scouring powders containing CMC were found to be less gritty and scratchy and to have a smoother feel. In addition the CMC acts as a spreading and dispersing agent in water. This not only improves rinsibility but also prevents the water-insoluble abrasives from settling out in drain pipes. Formulas illustrating the use of small quantities of CMC in scouring powders are given; the following being a typical example:

	per	cen
Volcanic ash		83
Modified soda		12
Sodium alkyl aryl sulfonate		3
Sodium carboxymethylcellu	lose	2

In addition to the abrasive, scouring powders also contain detergents and alkalies. The alkali serves as a water softening aid and assists in cutting the grease and oily soil. Sodium carbonate is the alkali most frequently used in scouring powder formulations. However, it has a harsh effect on the skin of some people and has other disadvantages. Hence, the soda ash may be replaced, in whole or in part, with other alkalies. Thus, it has been noted (11) that instead of using sodium carbonate as the sole alkaline filler of a scouring powder, it is common prac-

tice to use some trisodium phosphate and sodium silicate.

Of course it is quite possible to make an effective scouring powder from mixtures of abrasives and alkalies, without including soap or synthetic detergents. John (15) has presented several such combinations; one formula calling for the use of:

			p	arts
Pumice powder				80
China clay				
Soda ash				10
Sodium metasilicate				10

Soaps and Detergents Used

A LTHOUGH in a number of cases soap appears to be giving way to the synthetics, it continues to serve as the detergent in many scouring products. Smith (9) has advised that the soap used in such cleaners should preferably be a good coconut oil soap which dissolves easily in hot or cold water and lathers freely. The method for making scouring powders is similar to that used for making soap powders, but it may be necessary to use a heavy type mixer because of the greater density of the abrasive product. With some products, however, a suitable powder mixer will serve. (6)

Many formulas are available for making the standard types of scouring powders, as well as more specialized products. As remarked by Smither (19) a scouring powder often consists of a uniform mixture of soap powder and an insoluble abrasive. A product made along such lines might therefore consist of: (20)

				10	arts
Soap	powder	****	 		7
Silica	nowder	ed			93

Also indicative is the following formula which, according to Alperin (21), approximates the Federal Specification for a general purpose scouring powder:

1	arts
Sodium carbonate	12
Curd soap, powdered	7
Abrasive	81

Belanger's (22) text provides another illustration for making a general household cleaning powder. This consists of the following materials which are mixed intimately by sieving:

								p	arts
Powdered	borax								5
Powdered	soap								20
Soda ash									
Powdered									

Other modified or more or less specialized scouring powders may contain soap as the detergent. For instance, a bathtub cleaner, which is said to give efficient mechanical and detergent action, may be made from:

	parts
Trisodium phosphate	10
Powdered soap	20
Fine abrasive (chalk)	70

Soap may also serve as the detergent in Type I and Type II scouring powders for floors as standardized in Federal Specification P-P-591a. In Type I powders for fine marble floors, the volatile matter must not exceed 10 per cent. The total of sodium carbonate plus anhydrous soap or active anhydrous salt-free synthetic detergent or a combination of the two should not exceed seven per cent or be less than two per cent. The proportion of insoluble siliceous material ranges from 85 to 95 per cent. All of the abrasive must pass through a No. 100 sieve and the residue retained on a No. 200 sieve must not exceed five per cent. It is also required that the powder shall not scratch nor discolor marble.

Alperin (21) has suggested the following formula as corresponding roughly to this specification; the abrasive to meet the requirements given in the standards:

			T	parts
Sodiur	n car	bonate		4
Curd	soap,	powdered		3
Ahrasi	ve			93

The volatile matter content of Type II powders for tile or ceramic and terrazzo floors must not exceed 10 per cent. The sum of sodium carbonate and detergent must not be less than two per cent. The abrasive, comprising 80 to 95 per cent of the powder, should not yield more than one per cent of residue on a No. 60 sieve nor more than 10 per cent of residue on a No. 80 sieve. Again citing Alperin, a cleaner approximating these

requirements can be made from:

3	parts
Sodium carbonate	5
Curd soap, powdered	. 8
Abrasive powder (as specified)	87

Synthetic Detergents Use Up

AS WAS previously noted, synthetic detergents are finding their way into scouring powder formulations as a partial or total replacement for soaps. This ather rapid trend was well indicated by A. B. Hersberger in his talk at the annual (1950) meeting of the Association of American Soap and Glycerine Producers. Here it was pointed out that during the past two years many scouring powders have been reformulated using petroleum base (e.g. alkyl aryl sulfonates) synthetic detergents. Also very indicative is the report (13) that of six popular brands of scouring powder found on the New York market, five use a synthetic material as the detergent and only one uses soap.

It has been found that the addition of a suitable synthetic detergent yields scouring powders with high cleansing efficiency and rapid rinsing characteristics. Smith (9) has remarked that it is advisable to include a small percentage of a good synthetic detergent in the formula. Such a material will function efficiently in hot or cold water and in hard or soft water, as well as in alkaline or acid solution. He notes that a suitable additive of this kind can readily be found which will lend itself to blending with the other ingredients.

Synthetic detergents can be used, of course, in the scouring powders covered in Federal Specification P-P-591a. Other data sources similarly provide information on products containing these materials. For example, in his discussion on surface-active agents, James (23) suggested the following general formula for a scouring powder:

	per	cent
Abrasive		90
Detergent		5
Sodium metanhosnhate		5

The detergent, says he, should be one that is compatible with soaps and has a maximum grease-removing ability.

More specific is the formula given by Bacon and Vaughn (18) in the educational portion of their patent. Their investigations showed that a typical commercial product contained:

	pe	r cent
Silica flour (140 mesh)	Ω.	93.5
Tetrasodium pyrophosphate		2.0
Bentonite		0.5
Sodium alkyl aryl sulfonate		4.0

The detergent is described as a "salt built" synthetic material containing 58 per cent by weight of sodium sulfate.

Also worth noting, although the proportions are much different from the usual ratios, is the following scouring powder as cited by Bennett: (20)

	parts
Sodium alkyl aryl sulfonate	
("Nacconol NR")	25
Trisodium phosphate	
Volcanic ash	

Triturate the detergent and phosphate together, then mix thoroughly with the volcanic ash and pass through a 100-mesh sieve.

It has also been noted previ-

Kosher scouring powder made by I. Rokeach & Sons, Inc., Brooklyn, makers of kosher soaps and food products, is now available with new label design. Older style label

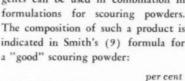
ously that soap and synthetic detergents can be used in combination in formulations for scouring powders. The composition of such a product is indicated in Smith's (9) formula for

	per	cent
Coconut oil soap		5.0
Sodium silicate		
Sodium carbonate		3.5
Synthetic detergent		1.5
Pine oil		0.5
Mixed abrasives	1	35.0
Moisture		

Scouring Bars

AKE or bar scouring cleansers have lost ground during recent years but they still command a respectable market. For example, the 1947 consumer analysis (24) of the St. Paul market showed that 25 per cent of the families studied were buyers of such products. Scouring cake soaps consist largely of abrasive material, like silica, feldspar, pumice or volcanic ash, with soap as a binder. Rather substantial proportions of alkali are also frequently present. In passing it may be noted (25) that during the war, the Germans greatly reduced the soap content of scouring tablets or cakes. To make up for this deficiency, they used alginates and sodium

is shown at extreme left; new front and rear label panels shown center and extreme right, respectively. New label design has been adopted for the rest of the line.



ers in the products. When making an abrasive soap cake for general cleaning purposes, one

silicate solutions (waterglass) as bind-

expert (9) feels that the following factors should be borne in mind: (a) The product must have a smooth and attractive appearance and be free of cracks, (b) It should give a good lather and have a quick grease-cutting action, and (c) It should last well. Pertinent in this connection is the observation by Thomssen and Mc-Cutcheon (11) that the greatest problem in the manufacture of a scouring soap is to prevent cracking of the finished cake. Such cracking is usually attributable to excessive filler or moisture, with not enough soap to hold the cake together. Although grease soaps are sometimes employed, they point out that most producers favor a coconut oil soap as the binder because of its superior lathering proper-

These authorities also describe a typical method for making scouring soaps. In their procedure, 25 parts of a settled soap base high in coconut oil are run or pumped to the crutcher. To this is added the required proportion of 38° Be. sal soda or soda ash solution, plus a small quantity of sodium chloride solution. After uniform mixing, 75 parts of silex are added, together with enough hot water to make a readily-flowing mass, but not so much as to cause the mass to crack on cooling. When the charge is in proper condition, it is dropped into suitable frames and cut before it sets, or it is poured into molds to set.

Although it is not customary, the scouring cakes may be perfumed, if desired. This brings to mind the fact that some brands of scouring powder are being perfumed as an added merchandising aid. This is an advantage in covering the somewhat earthy odor that is perceptible when using certain products. Unfortunately some of the perfume compounds chosen for use in scouring powders seem hardly appropriate to the kitchen. Odor is also an important consideration in a scouring paste, because of its fatty or soapy odor. It has been suggested (7) that

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Scrubbing Soaps for Soft Floors \equiv

By Ralph B. Trusler *

Davies-Young Soap Co.

HE problem of this discussion is that of cleaning floors, more commonly termed "scrubbing floors," mainly, I presume, because scrubbing designates a muscular effort on the part of the operator. Much of this hard work is now done by mechanical means, especially where the areas to be cleaned are large. Fortunately, whether the scrubbing is to be done by hand or by machine, the same kind of cleaning and scrubbing agents can be used by either method, perhaps not with equal ease or efficiency, but quite generally this is true. While my part of this discussion concerns soap, it is propitious to refer to synthetic detergents for certain purposes for which soap is not best suited.

When we think of floors we think of wood, linoleum, asphalt and plastic tile, ceramic, rubber, terrazo and concrete. The present discussion is especially committed to floor coverings such as asphalt tile, linoleum and rubber. Each of these may present an individual problem. When we think of soap, it may be powdered soap, pure or built, liquid soap as such or with dissolved cleaning aids. These soaps may be neutral, they may be alkaline, they may be sodium or potassium types, and then the anion may be an organic amine. Sometimes any one of these may be used with equal results, in other cases the requirement is specific. What concerns us most is which one is the best soap for the job.

A good example of this point

is flushed over concrete. If this were all that happened then soap could be made to function on this surface, but since there is a reservoir of available calcium ion in the concrete, all we can expect is to have a soluble soap converted into insoluble and useless calcium soap. In this instance the addition of sequestering agents is not the answer, for these only tend to remove more calcium ion from the concrete. This leaching action would eventually lead to pitting and disintegration. The cleaning of concrete can best be left to a different detergent.

Detergents with Raised pHs

URING our study of detergents suitable for cleaning floors, we found that a number of synthetic detergents cleaned best when extra alkali was added to their solutions, enough to raise the pH from 9.0 to 11.5. Others performed best at 8.5 pH and below. This wide range of effective detergency hardly justifies some rampant statements that these products are better to use on floors because of their low alkalinity. Liquid and powdered soaps having a pH of 10.5 to 11.5 have been used on rubber, asphalt tile and linoleum floors for a long time. The good or bad effects of high alkalinity have been contended. Some

plastic tiles are very resistant to alkaline solutions of the above order. Some rubber flooring, pigmented with red and white mineral, showed loss of pigment and erosion when submitted to successive washing tests with a solution of soap built with T.S.P. A set of black rubber test pieces appeared to be uninjured under the same conditions. Such tests become controversial because the composition of similar appearing material, made by different manufacturers, differs. It is a fact that under some circumstances rubber flooring is hurt by highly alkaline cleaners.

Linoleum presents a definite risk because it is composed partly of polymerized vegetable oils that are saponi-Manufacturers of linoleum have been in the habit of recommending "neutral" cleaners for their flooring. This caution is worth heeding, but many maintenance people undervalue the suggestion.

Waxed floors also bear special consideration. It makes no difference whether or not the wax film is on linoleum, tile or any floor covering, its permanence is generally affected by the detergent used upon it. The more alkaline cleaners are likely to be wax removers. This is all right if one wishes the wax removed, but if it is

is concrete flooring. Here we have a surface that is a source of abundant lime. Soft water can become hard water within a few moments after it

*Before Chemical Specialties Manufacturers ssn. Meeting, Washington, D. C., Dec. 5-6,

only surface soil that requires expending, then care should be exercised in selecting the cleaning agent. Varnished surfaces present a similar condition.

Alkalinity of Scrub Soaps

S CRUBBING soaps have too frequently made highly alkaline solutions. This high alkalinity was born of necessity. At one time soaps having low alkalinities (pH's of 8.0 to 9.0) were poor detergents for cleaning floors. Our observation upon cleaning test sections of an asphalt tile walk-way was that a neutral soap solution (pH 8.2-8.5) cleaned a small area quite well, but that, as the area was enlarged, it soon was rendered useless by the pick-up of soil that caused the soap to precipitate or to form typical hard water curds. The addition of extra alkali, such as T.S.P. or soda ash, or a sequestering agent such as sodium or potassium polyphosphate, restored the detergency, but rendered the solution strongly alkaline. Hence, the alkaline salts convert the once neutral soap into an alkaline cleaner, or so termed built soap.

The trend away from alkaline cleaners has been an argument for synthetic detergents, which range from about 6.0 to 9.5 pH. Observation of cleaning test areas has shown that all but one synthetic detergent (of those encountered in our study) cleaned floors so incompletely that additional soil could be removed with a soap solution. The problem then became that of how to make a neutral soap solution retain its initial ability to clean without having to resort to alkaline additives. Until recently this has been commercially unattainable, but since the advent of chelating agents, scrubbing soaps can be made to perform through a wide range of alkalinities. For example, a liquid soap having a pH of only 8.0 to 8.2 will clean floors nearly as well as soaps having a pH of 11.0 simply by including sufficient chelating compound in the formulation. Such soaps having an initial pH of 8.0 to 8.5 can retain their ability to clean throughout a mopping operation. Soap now can be supplied in grades that will function at a relatively low alkalinity up to the usual high alkalinity. Thus, soaps,

aided by chelating agents, can perform through the range of nearly neutral to highly alkaline, and can maintain their important and economical position as scrubbing and cleaning aids in operation sanitation.



OVER a year ago, this writer prepared a paper on product liability insurance as it affects the small manufacturer. Soap and Sanitary Chemicals carried most of the salient facts which the writer stressed as extremely important for the small manufacturer who has failed to realize the importance of this special coverage.

The subject has been revived in the recent decision against J. R. Watkins Co. of Winona, Minn. The inevitable verdict against a large corporation rendered by a jury was definitely unfair, and may be reversed or mitigated by a higher court. But the red signal is ablaze, and it behooves every manufacturer, large or small, to get insurance coverage at once.

The cost is so small in comparison with the benefits, that it is a "must."

Most of the lawsuits filed for personal injury are strictly nuisance actions and are usually settled out of court by trained insurance personnel. However, the damages claimed in some cases may reach proportions which would seriously impair the financial status of the small manufacturer or destroy his hard earned good will in the trade.

Naturally, every manufacturer strives to manufacture and market good merchandise, and is careful in labelling and advertising the merits of his products. This caution is often insufficient to prevent injury in special cases where a person is allergic to some ingredient in the product (examples: soap, lipstick, lotions, creams and even cleaning fluids). This remote cause of injury can often be covered by a warning on the label that its use be discontinued at the first sign of the allergy.

The writer previously reviewed many cases on the subject to emphasize the varied claims for damage and the frequent weird decisions which were rendered and subsequently reversed by the higher courts.

In this age of progress everyone strives to outdo his competitor or over-emphasize the merits of his product. Therefore, it is essential that the utmost care be used in the manufacture and laboratory control of the merchandise. Also in case of wide distribution (nationally or worldwide) be certain that the conditions in every territory will be compatible with your product.

The public is asserting itself when a wrong is done. Whether you manufacture food, soap and cleaning products, clothing, or electrical equipment, you are open to claims for damages. With the best of intentions, we all make mistakes, so Product Liability coverage is the answer to this nightmare. See your insurance broker to-day if you are not covered.

The appointment of three members of its sales organizations to new posts in the Atlantic and Central division was announced recently by American Can Co., New York. E. K. Walsh has been named manager of sales for the Atlantic division, succeeding T. E. Alwyn, who recently became company-wide general sales manager. Mr. Walsh had been serving as assistant manager of sales for the division, a post which has been given to B. R. Wood, formerly sales division manager. D. B. Craver is now assistant manager of sales for the central division, having previously been a sales division manager.

Soaps and Detergents in the

GILLETTE REPORT ON

PHE following section (IV. Soaps and Detergents) is taken from the recently issued report of the Committee on Agriculture and Forestry of the U.S. Senate. The report, is based on the investigation of the Gillette subcommittee, as authorized by Senate Resolution No. 36, and is divided into six chapter headings. In addition to the portion on soaps and detergents there is an introduction, which sketches in the background of the hearings, which began about a year ago and ran through the summer. The domestic and world situation, both at the time of the hearings and earlier, are outlined with some statistics.

"General Uses and Interchangeability" forms the second part of the report. In this section it is stated that "Coconut oil, babassu and palm kernel oil (all imported products of the Tropics) compete with domestic lard, tallow and grease in the soap industry."

Various oils and fats and their consumption and production, as well as price history, are covered in "III. Special Problems of Certain Fats and Oils."

The fifth section is devoted to "The Use of Fats and Oils in Bread and Bread Emulsifiers".

The final section of the report, "VI. Additional Recommendations." urges that Senate Bill 1594 or similar legislation to equalize imports and exports of fats and oils be passed; that the Fats and Oils Branch of the Department of Agriculture be overhauled, and that the law extending controls over imports of fats and oils be continued for another two years, thus permitting imports of only "such oils as are essential to the domestic economy."

In general, the sense of the report seems to be that imports of foreign oils represent a threat to domestic farm producers of these materials, and that protective legislation restricting imports should be enacted. The erroneous idea that coconut oil and other high lauric acid oils are interchangeable with tallow as soap raw materials is emphasized. The need to be completely independent of foreign sources of fats and oils is mentioned, again to be achieved through restricting imports, requiring labeling of fat content and continued high rate of production of domestic oils and fats.

The text of the section on Soaps and Detergents follows:

IV. Soaps and Detergents

BOUT 80 percent of the soap business is done by three large companies, the Colgate-Palmolive-Peet Corp., Procter & Gamble Co., and Lever Bros. Co., the latter controlled by Unilever. In package goods the estimate is even higher; namely, 90 percent.

"The number of independent soap companies sharing the balance of the business has declined. An independent soap manufacturer stated that the three major soap companies were advertising the independents out of business.

"In the period 1937-48 the soap industry doubled its use of inedible tallow and grease, from 708,000,000 to 1,451,000,000 pounds. Yet the produc-

SENATOR GILLETTE



tion of soap remained around the 3,000,000,000-pound level. Over that period the soap industry steadily increased oil use. The soap industry also attributes some of this increased use to its research in greater utilization of domestic fats and oils with resulting new equipment to upgrade tallows and thus providing a market for materials which were formerly unsatisfactory for use in soap. In the same period per capita consumption of fats and oils used in all soaps in the United States went from 12.9 pounds in 1937 to a high of 17.4 pounds per capita in 1947, 14.4 pounds per capita in 1948, and 12.6 pounds per capita in 1949.

"The lauric acid oils (coconut, palm kernel, and babassu) used in soaps for sudsing qualities are all imported into the United States. Domestically we produce no oils of this character.

"It was generally stated that the soap industry must use about 20 percent lauric acid content oils in order to produce proper sudsing qualities. This ratio of from 20 to 22 percent of lauric acid oils in soaps seems to be a constant; it is the maximum that can be used as arrived at by experience over the years. During the war years obviously the imports of lauric acid oils were down and their use consequently suffered. One manufacturer in commenting on the soap companies' ability to pull through the war years with less lauric acid oils stated, 'We made an inferior soap.'

"Production of bar toilet soaps increased from 383,000,000 pounds in 1937 to 478,000,000 pounds in 1948 and of granulated soaps increased from 853,000,000 pounds to 1,355,000,000 pounds. These are the only types of soaps that increased in quantity in that period and both types take a higher fat content than the others. This accounts in part for the increased use of fats and oils over the period, while the soap market remained almost static in total consumption.

"In past years the soap industry has provided the largest market for inedible tallow and grease. Normally about 80 percent of such products have found their way into the soap kettle. Competition from foreign oils going into soaps, detergents made from petroleum taking over the soap market, and increased marketings of livestock plus more efficiency in recovery operations have served to drive the prices of inedible tallows and grease below any other product on the commodity list.

"Total industry soap sales aver-

OILS AND FATS

Legislation requiring labeling of soaps and detergents and removal of the exemption on soaps and detergents in the Food, Drug and Cosmetic Act recommended by Senate subcommittee to increase oil and fat usage.

age around 3.000,000,000 pounds; the high years were 1941 with 3,608,000,000 pounds (accounted for by the rush of the public to stock up on soap) and the year 1944 with 3,753,000,000 pounds (accounted for perhaps by the fact that it took more pounds of soap to do the same cleansing job). In 1948 soap sales declined to 2,797,000,000 pounds.

"Meantime sales of synthetic detergents, starting with small household use in 1936, had reached only about 17 million pounds by 1940, but by 1948, 600.000.000 pounds of detergents were sold. Of this 400.000.000 pounds were sold for household use and 200.000.000 pounds for industrial purposes. The bulk of synthetic detergents is made from petroleum although some small quantities are made from coconut oil and some of the domestic fats and oils.

"Some detergents have a petroleum base and are truly named synthetic detergents while others have a fatty oil base and are strictly not synthetic at all. However, industry reference seems to lump them all together in describing them as synthetic detergents or detergents as distinguished from what is commonly known as soap. Petroleum bases are used for what are known as the heavy-duty types of detergents for family wash and dishes; while sulfonated alcohol bases from coconut oil (and, it is hoped, from tallows and grease) are used in the fine-fabric field, the smaller field of the two. No near solution of the problem of using inedible tallows and grease as a base for synthetic detergents is predicted, although manufacturers say they are spending large sums endeavoring to combine soaps and synthetic detergents so that more fats and oils will be used.

"The soap manufacturers contend that soap sales in 1949 will total around 3,200,000,000 pounds, which is above the average annual production; and this despite an estimated sale of 800,000,000 of synthetic detergents. This seeming paradox is explained by the fact that, while synthetic detergents have supplanted soaps in some homes, all homes

put together have raised their total usage of cleansers, and likewise new fields which were untouched by soaps have been opened up by synthetic detergents. It was estimated that from the approximately 25 percent of the market taken by synthetic detergents in 1948 the percentage will jump to 33 percent in 1949, although quarterly figures thus far do not bear this out.

"Granted that sales of soap will not increase, due to the use of synthetic detergents, it is important to determine whether the present market for fats and oils in soaps can be maintained. One large soap manufacturer, asked whether the development of detergents was destroying the soap market, indicated that manufacture and sale of detergents had been superimposed on the soap structure, and added:

"To state it another way, 30 years ago you were not using over a million and a half bounds of soap; then you got up to 3,000.000 000 pounds; now you are up to 4,000.000,000 pounds. Since the detergents have really come into the picture, you have been around 3,000,000,000 pounds, and this year I think will be the largest year, probably 3,200,000,000, and then superimposed on top of that will be about 800,000,000 pounds of detergents."

"One manufacturer calculated that had not detergents entered the field so rapidly 1948 sales of soap would have been 11 percent higher than they were. Home consumption of soap, 1948 over 1940, despite an 11 percent increase in population, remained almost static. This alone lost a potential market for inedible tallows and grease of about 350.000.000 pounds—about the amount we are now overproducing.

"The soap manufacturers point with pride to the fact that in the 1936-39 period usage of domestic inedible tallow and grease totaled only 786,000,000 pounds, while in 1948 they used 1,457,000,000 pounds; and that while production rose 100 percent the soap-makers' consumption rose 90 percent. They pointed out that in normal

times the soap industry had to seek fat supplies to supplement tallow and grease but that today the opposite is true.

"The soap maker depends on imported coconut oil (and other lauric acid oils) up to about 20 percent for certain characteristics, principally sudsing, in his soap formulas. Prior to the war, when inedible tallow and grease sold for 6.3 cents per pound and the coconut oil tax paid on the Pacific coast was 7 cents per pound, the tendency was to use more imported oils. During 1949 the price of coconut oil was over three times that of inedible fats and oils. This was due to the fact that foreign countries use coconut oil in the manufacture of oleomargarine and as a food product, and were bidding up the price for the existing supply.

"Imports of various fats and oils for soap making for the years 1935-39 averaged 187,100,000 pounds and in 1947 and 1948 stood at about 80 percent of this figure. Should the foreign countries let up in their buying of coconut oils and let the price return to anywhere near the domestic price of fats and oils, the floodgates would be opened wide to the importation of an endless number of tropical and marine oils.

"While selling detergents at comparable prices with soap, manufacturers estimated that the gross profit percentage was larger on soaps than on detergents.

"It is claimed by the manufacturers that to do a cleansing job less synthetic detergents are required than soap, the degree depending on the hardness of the water. Also they assert that detergents perform equally well in hard and soft water because they form no scum and clean dishes and clothes more thoroughly than soap. In fact, synthetic detergents will work in water so hard that soap would be almost useless.

"Detergents have some special uses, such as cleaning milking machinery, where undoubtedly they perform better than soap. In fact, there are some uses—cleansing streets, washing paint brushes, making concrete, etc.—where soap is not even displaced.

"Manufacturers of finished detergents for the household are the traditional old-line soap companies. They take the position that they will make what the public is willing to buy.

"There is a possibility that methods will be developed to utilize the domestic tallows and grease in the making of detergents just as some coconut oil is now used to make detergents.

"Although the first synthetic detergent-compound manufacturers were chemical companies, the largest manufacturer of synthetic detergents at present is the Oronite Chemical Co., a subsidiary of the Standard Oil Co. of California, which uses propylene as a base-charging stock. Propylene is produced in cracking petroleums either catalytically or thermally. This company started since the end of the war,

and, like most of the other concerns in the business, generally sells its product through the established soap manufacturers. It entered the field at a time when there was an acute shortage of fats and oils and a very great need. Since that time the situation has been reversed.

"Synthetic detergents are made or compounded by concerns in the soap, oil, and chemical fields; the nomenclature is confusing because one group calls its product synthetic detergents, another wetting agents, and others just a chemical. Different concerns buy the base product in different stages of manufacture.

"Oronite's principal product is a hydrocarbon made from propylene and is known as 'Alkane'. This is the product sold to the soap companies, and it thus becomes the soap companies, and it thus becomes the soap companies' raw material for synthetic detergents. The soap companies are Oronite's largest customers. At the start, some 2½ years ago, this product sold at 32 cents per pound but is currently sold at 15 cents per pound. As cost diminished and volume increased, price reductions have occurred. In the 2½ years all price changes were downward. No further large reductions are envisaged by the company. The rapid reductions are explained as the result of competition from other producers of raw materials for synthetic detergents, and not of reductions in fats and oils prices.

"Synthetic detergents sold to the consumer are usually on about a 35 percent active-ingredient basis. In other words, 1 pound of 'Alkane,' with added inorganic builders, will make about 3 pounds of finished soap.

"Thus the cost of the basic ingredient in synthetic detergents is about 5 cents per pound. Synthetic detergents are here to stay, according to the manufacturers of the raw material and the soap companies. This, they say, is dictated by the American housewife, particularly in hard-water areas. This is so even though it costs the manufacturer much more to manufacture a package of synthetics than it does to produce a comparably sized package of soap. The differential in cost of synthetic detergents over soap is accentuated as the prices of fats and oils return to normal levels. The very high prices of fats and oils immediately following the war no doubt did accentuate the forcing on the market of synthetic detergents. Despite the higher costs of synthetic detergents they sell on a competitive basis with soaps.

"Producers complained that while prices on fats and oils had been reduced 80 percent the price of soaps had come down only 30 percent. No satisfactory answer was forthcoming from the soap manufacturers. Explanations of price return on glycerin, higher labor costs, overhead, etc., seem unconvincing when it is considered that of the fats and oils used the lauric acid oils (up to 20-22 percent) are the only ones that have not returned to their prewar level. Inedible tallow and grease have been below their immediate prewar level of prices and the soap makers' return on glycerin has been about twice that obtained prior to the war.

"Glycerin, being a byproduct of soap manufacture, may well be considered in the same category. The soap maker secures about 2 pounds of glycerin to a case of soap. Whatever the glycerin brings in the market, less the cost of recovery, is credited against the cost of the raw material used in soap making. Glycerin is strictly a byproduct and the price received for it influences the cost of soap.

"There are substitutes for glycerin such as ethyl glycol, and at least one large petroleum company is producing what it calls synthetic glycerin. Direct production of glycerin by the fermentation process has not been developed fully in the United States although United States capital and patents are in the process of constructing such a plant in Cuba, using blackstrap molasses as a raw material.

"The uses of glycerin run into the 'millions,' according to one witness. An independent soap manufacturer contended that most soap makers removed the glycerin in making soap because of its high price and substituted a cheaper product to lower the tension of the surface of the water. He contended that the natural glycerin made a better soap, and that all fancy toilet soaps contain glycerin. Large soap manufacturers, while admitting that glycerin was used in fancy bar toilet soaps, state that in their other soaps they use up to one-half of 1 percent and that glycerin in excess of this amount has no beneficial quality effect in soap.

"In the course of the hearings it developed that when the Federal Food, Drug, and Cosmetic Act was enacted in 1938 the use of synthetic detergents was so small that the question of soaps and detergents was left out of the law entirely. The largest of the skin cleansers was given a specific exemption from the applicability of the act. As the studies proceeded, the subcommittee chairman sponsored bills to bring the act up to date by amendment, and also sponsored a separate bill to cover the household cleansers not otherwise covered by the act. These bills are as follows:

"S. 2392, to enlarge the definition of cosmetic contained in the Federal Food, Drug, and Cosmetic Act by removing the exception made in the case of soap, referred to the Senate Committee on Labor and Public Welfare.

"S. 2531, to amend the Federal Food, Drug, and Cosmetic Act to require the labeling of soaps and detergents, referred to the Senate Committee on Interstate and Foreign Commerce.

"S. 2656, to prohibit the movement in interstate commerce of injurious, misrepresented, and uninformatively labeled household cleansers, and for other purposes, referred to the Senate Committee on Interstate and Foreign Commerce.

"The committee recommends the enactment of the three proposed pieces of legislation but is of the opinion that all three bills should be considered by the same standing committee of the Senate rather than be parceled out to separate committees".

Solving a

HE redesigning of its complete line of cleaner and food products packages announced recently by I. Rokeach & Sons, Inc., Brooklyn, was done with the idea in mind that "A good package is the cornerstone of successful advertising and sales promotion," according to Henry Gamson, president of the concern.

One of the problems faced by the company was the achievement of a strong family resemblance in the appearance of packages for its line of 50 individual products. Formerly Rokeach labels were of heterogeneous design, which stemmed from the fact that the company had grown from making Kosher soap to a large scale food corporation. The founder, Israel Rokeach, since his introduction of Kosher soap in the United States in 1890, added new products as individual entities without any consideration for association other than through a common name. This seems to be a common

New and old labels for "Rokoh," now "Roko" super foaming cleanser. The foil label is printed in three colors: yellow, white and midnight blue. The new label also carries the "IR" trade mark.



a Cleanser Packaging Problem

fault among many food manufacturers whose operations have grown over a number of years.

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Curiously, the one product whose packaging and label design remains unchanged is Rokeach Kosher soap. In this case the manufacturer feared older users might mistakenly assume the soaps, in their distinctive red and blue packages, were no longer Kosher made.

Another reason advanced for changing the label designs on cleaner and food products was the reaction of distributors and grocers, who were said to feel that previous designs lacked modernity and were not in keeping with the quality of the products. In addition, the company had in mind expanding its sales among young housewives whose tastes run to eye-appealing packaging.

One big obstacle confronting industrial designers in redoing the Rokeach label was the company's demand that a Kosher seal be conceived having a modern appearance and still retaining traditional Hebrew lettering signifying rabbinical approval. The answer was found by research workers for Koodin-Lapow Associates, New York industrial designers. They came across a Maccabean coin of the second Century B. C., used in biblical times. Embossed on the shekel was a luxuriant palm which symbolized purity, cleanliness, quality and abundance.

The Kosher seal, carried on all wrap around labels, is in the form of a square with rounded corners. The perimeter of the seal has on its top the Rokeach logotype and the word "Kosher" on the bottom. On one side is the world "quality" and on the other side, "product." The center of the seal depicts the Star of David, a set of palm branches and the Hebrew letters designated Kosher.

The redesigned line utilized two-color printing to achieve individuality and distinctive character. The colors, however, are varied on different packages, but the "IR" and the superimposed "Rokeach" in bold logotype bind the group into a tightly knit family. The colors are intended to highlight, suggest and simulate package content.

Two of the products, cleansing powder and silver polish, have label paper that has a tinsel quality for water repellency. A psychological note was applied in the designing of the cap and jar for the silver polish. Duplicating the containers for the packaging of cold cream-a squat jar with white enameled screw top-the designers believe the average housewife phobia of marring the beauty of her hands is overcome. Planned to give a "cosmetic" feel to the silver polish a blue foil label is used. The "IR" dominates the wrap-around label by appearing independently in white lines of the blue background, suggestive of fine silverware engraving.

Label formats were shifted from spot panel style to wrap around variety. The latter has the advantage of providing space for an advertising message, listing other products, enumerating the ingredients and giving full product description.

Since it was found by the designers that the tops of a great many food packages are seen first by the consumer, strong treatment of package tops to project Rokeach identity effectively was suggested.

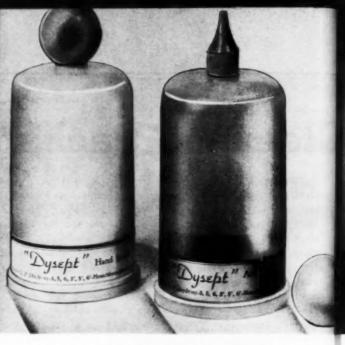
The exception to the horizontal line of color separation, a dominant part of the Rokeach redesign plan, is that of the company's scouring powder. The label of this product has been planned as a transition from the old to the new. Basically it has been kept in its original form, utilizing the same red, white and blue color scheme, since it was felt that a complete change at

(Turn to Page 67)

New label designs or packages for the Rokeach line of cleansers include, left to right: "Roko" super cleanser, silver polish and front and rear panels, respectively, of the new scouring powder label design. The new container for silver polish has been designed to give the product a cosmetic like appearance and feel.



What's New?

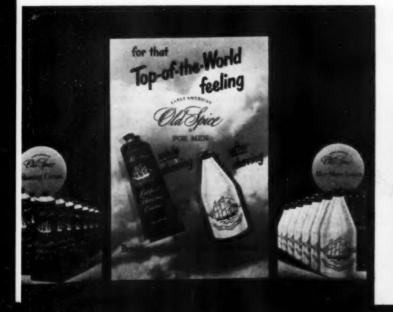


New companion packages of non-breakable, squeezable plastic bottles announced recently by Davies Young Soap Co., Dayton, O., for its "Dysept" hand lotion and antiseptic liquid soap that contains hexachlorophenol as its antiseptic ingredient.



to tie in with its national advertising campaign, Shulton, Inc., New York, is using this point-of-sale display for its Early American Oil Spice shaving cream and after shave lotion. Shulton designed the displays which were lithographed in eight colors by Einson-Freeman of Long Island City, N. Y.

"Cheer" detergent is the newest addition to the line of Procter & Gamble Co., Cincinnati, It is being promoted as a "no-rinse" detergent, and was marketed for the first time recently in Syracuse, N. Y. and Kansas City, Mo. It is in powder form.









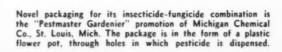


New "A-Penn Wick Deodorizer" set of A-Penn Oil Co., Butler, Pa., featuring two six-ounce bottles of liquid deodorizer in display carton to retail for 69 cents. Emerald Green oblong bottles used are by Owens-Illinois Glass Co., Toledo, O.

New hard milled South American toilet soap, made in Venezuela, closely resembles similar American products. Comes packaged in red carton with the word "Joy" in white letters.



Seaforth toiletries for men recently announced a gift package of shaving accessories designed especially for Father's Day. Gift box, featuring full-color Highlander, carries a gift card.







For QUALITY Soap Making...

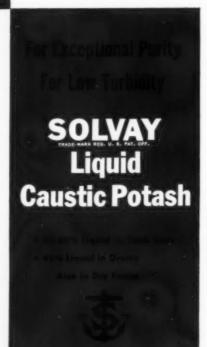
Specify SOLVAY LIQUID CAUSTIC POTASH





Soda Ash Caustic Soda Caustic Potash Chlorine Potassium Carbonate Calcium Chloride Sodium Bicarbonate Specialty Cleansers Sodium Nitrite Nytron **Ammonium Bicarbonate** Para-dichlorobenzene Ortho-dichlorobenzene Monochlorobenzene Methanol Ammonium Chloride

Formaldehyde







SOLVAY SALES DIVISION

TRADE

WEWS

Morse Lever Purchase Head

Emerson G. Morse has been named director of purchases of Lever Brothers Co., New York, it was an-



EMERSON G. MORSE

nounced by the company April 20. He has been with the firm for more than 27 years, for 18 of which he was purchasing agent for Lever's plant at Hammond, Inc., before transferring to the buying office in Chicago in May, 1948. Mr. Morse succeeds James F. Reeves, who retired last February because of ill health. Mr. Morse is making his headquarters at the Lever executive offices, 505 Park Ave., New York.

New Milk Shampoo

"Beauty Milk Shampoo" was announced recently by the newly organized firm of Beauty Milk Co., Chicago. The shampoo is packed in an eight ounce bottle to retail for around \$1. The product is being sold initially in Peoria and Joliet, Ill., having earlier been tested in Madison, Wis.

George S. Olds Dies

George S. Olds, 62, president and treasurer of Packers Tar Soap, Inc., Mystic, Conn., died April 12 of a heart attack. He was the son of Edward Allen Olds, who founded the company in 1869, and had been with the firm since 1910. Mr. Olds was vicepresident and treasurer from 1926 until 1944, when he became president and treasurer. He served with the Army Medical Corps during World War I. Mr. Olds is survived by his widow, three sons and a sister.

Fragrance Found. Meets

The first annual meeting of the Fragrance Foundation, Inc., will be held Thursday morning, May 18, in the Basildon Room of the Waldorf-Astoria Hotel, New York, beginning at 10 o'clock. Non-members are invited to be present at the meeting, following which the group will join the Toilet Goods Association for luncheon. Reports of the president, treasurer and coordinator will be given.

Ambler B. Cross is Dead

Ambler Belmont Cross, 64, sales supervisor in New York and Long Island for Colgate-Palmolive-Peet Co., Jersey City, died April 7 in Muhlenberg Hospital, Plainfield, N. J., after a brief illness.

John H. Knudsen Dies

John H. Knudsen, 77, a soap manufacturer, died recently at his home at 3480 Hunter St., Los Angeles. He is survived by his widow, Margaret.

Extra P&G Dividend

An increase in its quarterly dividend and the payment of an extra one was announced recently by Procter & Gamble, Co., Cincinnati. The quarterly dividend was 65 cents, which would be equivalent to 97½ cents on the old shares outstanding prior to the 1½ for one stock split effected last March. The extra dividend of \$1.10 a share is also payable May 15 to stockholders of record April 21. Quarterly payments on the old stock amounted to 75 cents a share and the year-end extra last May was \$1. The company's fiscal year ends June 30.

McIntosh Quits Army QM

James S. McIntosh, for the past seven years Procurement Specialist in soaps, detergents and chemicals for



JAMES S. McINTOSH

the Quartermaster Corps, Department of the Army, in New York, resigned April 15. He was tendered a farewell luncheon on April 14 by employes of the N. Y. Quartermaster Procurement Agency. Mr. McIntosh, some years ago head of the old Holbrook Manufacturing Co., Jersey City, makers of industrial soaps, has been in charge of all soap buying for the Army for world requirements. He has not announced any future plans.

To Represent Bon Ami

J. R. Spradley & Co., Miami, Fla., were appointed recently brokers for southeast Florida for Bon Ami Co., New York.

W. S. Thompson Is Dead

Warren S. Thompson, 72, who retired in 1947 as secretary of Pepsodent Co., Chicago, died recently at his home. He joined Pepsodent in 1920, having previously been assistant treasurer of the Illinois Central Railroad, with whom he had been associated for eight years.

P & G Earnings Up

Procter & Gamble Co. reported net profit of \$49,004,168 for the nine months ended March 31, comparing with \$33,581,913 for the comparable period ending March 31, 1949.

On Brand Names Board

Roy W. Peet, manager of the Association of American Soap & Glycerine Producers, and William G. Werner, public relations manager for Procter & Gamble Co., have been named to serve on the board of directors of the Brand Names Foundation. Mr. Peet will serve as the soap industry's representative on the board.

Market New Cleaner

The Sta-Wite Division of J. Thamm Refinishing Co., Brooklyn, is offering a new cleaner, "Sta-Wite," said to be specially formulated to remove yellow discolorations from white kitchen and bathroom surfaces.

Max Rauer of Fitch Dies

Max Rauer, for many years chief chemist of F. W. Fitch Co., Des Moines, died recently of a heart attack. He was well known in the toiletries and cosmetic field, particularly in the Chicago area.

Clorox To Build

Clorox Chemical Co., Oakland, Cal., manufacturers of laundry bleach, will shortly start construction of a new \$200,000 plant in Camden, N. J. The new plant will be in operation by fall, it is anticipated. It will employ about fifty workers, and will service customers in New Jersey, Pennsylvania, Maryland and Delaware.

File Lever Building Plans

Plans have been filed for construction of a 22-story office building which Lever Bros. Co. will erect at 378-88 Park Ave., New York, at a cost of \$4,500,000. Some of the buildings now on the site have yet to be removed before construction can be started.



LEVER'S NEW LOS ANGELES PLANT

Construction photos showing progress on the new soap and food products plant of Lever Bros. Co. in Los Angeles. Upper picture provides a general view, with soap processing building to left, office building center background, and soap finishing building to the right. Center photo shows soapery tank farm in foreground and edible tank farm in background. Lower picture is a closer view of the office building. The new plant is located on a 30-acre site, eight miles from downtown Los Angeles, and will cost \$25,000,000. More than 600 persons will be employed.

TGA Meets May 16-18

WO panel discussions, one covering association activities and industry affairs, the other devoted to sales, will highlight the 15th annual birthday and convention of the Toilet Goods Association, to be held at the Waldorf-Astoria Hotel, New York, Tuesday, Wednesday and Thursday, May 16-18. In general, the program is divided into two sections. Management and sales, and consideration of outside influence on the industry, as well as association business will be covered in the first two days of the meeting. The entire third and final day has been turned over to the Scientific Section.

Charles A. Pennock, of Hudnut Sales Co., New York, opens the meeting at 10:00 a.m. on Tuesday morning, May 16, with his president's report. A departure from the practice of former years, when individual reports were given at length, is the panel discussion of association problems. Participating will be S. L. Mayham, executive vice-president; H. D. Goulden, director of scientific research and standards; Hugo Mock, counsel; Gail S. Selig, California counsel; F. Weaver Myers, Washington counsel; and John P. Currie, labor relations counsel. Questions and answers from the floor will follow short presentations by each individual member of the T.G.A.'s executive staff.

The next order of business will be the election of officers, to be followed by a group luncheon in the grand ballroom. A motion picture, "Air Power is Peace Power" is to be shown through the courtesy of Eastern Air Lines following luncheon.

The Tuesday afternoon gathering is to be a "government session." Appearing will be John L. Harvey of the Food and Drug Administration; John C. Stedman of the anti-trust division of the Justice Department and an as yet unnamed representative of the Federal Trade Commission.

Wednesday morning, May 17, will be devoted to a panel on advertising, merchandising and promotion. Participants will include: George Van Gorder, president of McKesson & Robbins, New York; C. W. Browne, editor of Modern Packaging; Charles Caruso, vice-president of Schieffelin & Co., New York and Don Hobart, director of research of Curtis Publishing Co., Philadelphia.

A group luncheon follows the morning session. Shown at the luncheon will be the motion picture of the Food and Drug Administration: "Fraud Fighters." A feature of luncheons in past years, the Charles S. Welsh Memorial Award will not be given this year because the committee felt no one package merited the distinction.

A closed meeting of manufacturers only is to be held on Wednesday afternoon.

In addition to the all day meeting of the Scientific Section on Thursday, May 18, the Fragrance Foundation is to meet that morning, joining the group for lunch.

The following is the program for the meeting of the Scientific Section.

PROGRAM

SCIENTIFIC SECTION MEETING— THURSDAY, MAY 18, 1950 Morning Session—10:00 A.M.

- Formulation of Cold Wave Preparations, by I. R. Hollenberg, Van Dyk & Company.
- Some Applications of Statistical Method to Biological Problems in the Testing of Cosmetics, by Lila F. Knudsen, Statistician, Food and Drug Administration, Washington, D. C.
- Physical, Pharmacological and Dermatological Studies of a Sunscreen, by Lloyd W. Hazelton, Ph.D., Hazelton Laboratories, John Groopman, M.D., Bellevue Medical Center, and Edward P. Morrish, Firmenich & Company.
- An Appraisal of Methods Used in Caries Control, by J. F. O'Donnell, M.D., College of Dentistry, Univ. of Illinois.
- The Control of Dental Caries by Means of Oral Hygiene Procedures, by L. S. Fosdick, Prof. of Chemistry, Northwestern University Dental School.

LUNCH Afternoon Session—2:30 P.M.

 Solid Fatty Acids in Cosmetics, by William C. Griffin and Phyllis J. Carter, Atlas Powder Co., Wilmington, Del



FREDERIC SCHNELLER

Talks on Merchandising

"Sales Power in Merchandising" was the subject of a recent talk by Frederic Schneller, general merchandising manager of Lever Brothers Co., New York, at a luncheon held at the Advertising Club of New York, early in April. Describing advertising and merchandising as partners, Mr. Schneller stated that only through complete and sustained merchandising can grocers increase volume and profits without cutting prices or resorting to destructive "loss leaders." He defined advertising as the first half of the sales cycle, stimulating interest and moving consumers toward brands. Merchandising he called the second half of the cycle, which uses a special selling inducement to move brands closer to the consumer, with a goal of plus sales in the psychological zone of impulse buying.

He pointed to the "Lux" girl contest, the "Swan"-CARE campaign which, based on a broad humanitarian appeal, sent 1,500,000 bars of "Swan" soap to children in Europe, and other merchandise offers of his company as examples of Lever merchandising strategy.

The Development of Odor Preferences, by Dean Foster, Ph.D., Director Olfactory Research, Joseph E. Seagram & Sons, Inc.

Some Illustrative Phases of Biological Research in "Cosmeticology," by Dr. John A. Killian, Killian Laboratories.

To be announced when released by Atomic Energy Commission.

Since Floors Must Be Mopped Anyway... Why Not Rid Them of GERMS As Well As DIRT! STOP STOP Tames Varley & Sons.inc. MAIL THIS COUPON FOR FREE TRIAL OFFER JAMES VARLEY & SONS, INC. 1200 Switzer Ave., St. Louis 15, Mo. Please send, without obligation, FREE SAMPLE, prices and further information on SAN-I-FLOR to: ADDRESS

Lipscomb Heads Pepsodent

Charles T. Lipscomb, Jr., vicepresident and general sales manager of McKesson & Robbins, Inc., New York, was recently named president of the



CHARLES LIPSCOMB

Pepsodent Division of Lever Brothers Co., New York. He succeeds Henry F. Woulfe, president for the past four years, and more recently vice-president of Lever's mid-west operations.

Mr. Lipscomb had been with McKesson & Robbins since 1942; earlier he was associated with the national sales department of Coca-Cola Co. in Atlanta and prior to that was with Vick Chemical Co., New York, for 11 years, eventually becoming sales manager. He attended the University of North Carolina, where he played varsity football. Mr. Lipscomb is a resident of New York, and a director of the New York Sales Executives' Club. He is making his headquarters at the Lever executive offices, 505 Park Ave.

Hardesty Names Phillips

The appointment of William E. Phillips, Inc., as their Chicago representatives was announced recently by W. C. Hardesty Co., New York. The firm is continuing to carry warehouse stocks in Chicago.

Hughes New Oronite Head

T. G. Hughes, for the past year executive vice-president of Oronite Chemical Co., San Francisco, was recently elected president of Oronite, which is the chemical products subsidiary of Standard Oil Company of California. He succeeds George L. Parkhurst who was elected chairman of the Oronite board. Mr. Hughes joined Standard Oil Co. of California in 1926, and has been with Oronite since its formation in 1943. Mr. Parkhurst succeeds R. G. Follice, California Standard board chairman, who remains a director of Oronite.

J. Burr Wrisley is Dead

J. Burr Wrisley, 90, vice-president and a director of Allen B. Wrisley Co., Chicago, died April 11 at his home. He had been with the firm, which was founded by his father Allen B. Wrisley, for 50 years. Mr. Wrisley is survived by a daughter, Dorothy, four sons, George A., present head of the company, Harold B., L. Norton and Willis P. Burial was in Union Ridge cemetery.

Palmer Joins Pepsodent

Ted Palmer, formerly with Kator, Farrell, Cheley & Clifford, Inc., New York advertising agency, as assistant to the president and radio and television director, recently was named assistant advertising manager of the Pepsodent division of Lever Brothers Co., New York.

L. C. Linn Dies at Sea

Ludwig Carl Linn, for 15 years in charge of manufacturing for the Hillside, N. J., plant of Bristol-Myers Co., New York, died of a heart attack aboard the S. S. America en route to Germany. He was 72 years old.

Fitch V. P. Buys McRay's

L. R. Sandahl, vice-president of F. W. Fitch Co. for 25 years, recently acquired McRay's Co., Des Moines toiletries manufacturing concern. McRay's was established in 1937. Manufacturing facilities remain at Madrid, Ia. Other former Fitch personnel now associated with McRay's include Ralph McCall, former assistant chemist, and E. E. Begston, Trave Cohoon, Sidney Crimond, J. E. Gillespie, Alf Haynes, A. Mason, Francis Powers, Robert Smith and L. S. Stults, all former Fitch sales representatives, who now comprise the field staff of McRay's.

Andre Givaudan Visits U.S.

Following a three week visit to the United States, during which he conferred with leaders of the perfume and toiletries industry in the East and



ANDRE GIVAUDAN

Mid-West, Andre Givaudan of the Givaudan corporation, Geneva, Switzerland and Givaudan-Delawanna, Inc., New York, recently returned to Geneva. While in the U. S., Mr. Givaudan, in conjunction with the directors of the Givaudan corporation here worked out plans for the expansion of research and production facilities. The program calls for additional personnel and expanded laboratory facilities at Delawanna, N. J., and the launching of a research program to complement that of the parent company in Geneva.

Proposals leading to the strengthening of the international ties between the American organization and the new factories in England and Brazil were worked out by Mr. Givaudan and the executives of the company in the U. S.

SOCMA-MCA Outing Dates

The joint spring outing of the Synthetic Organic Chemical Manufacturers Association and the Manufacturing Chemists Association will be held Monday through Wednesday, June 19-21, at the Hotel Monmouth, Spring Lake, N. J. The groups will meet separately to discuss association affairs in the morning and afternoon of the first day, June 19, following which there is to be a joint meeting of both associations. A golf tournament and banquet are scheduled.

D-40 Detergent

mew whiter color

NOW IN 3 PARTICLE SIZES ...

New, whiter D-40 Detergent is now available in 3 forms—flakes, granules and powder. All are of the same high quality but differ in particle size and bulk density to suit any requirement.

The new D-40 possesses the same inherently superior characteristics as before. It is neutral, yet gives unexcelled detergency. It is a superior emulsifier of fats and greases, is excellent as a reducer of surface or interfacial tension even in low concentrations and is effective in strong acid or alkali solutions.

From any standpoint, D-40 is the ideal detergent for compounders and repackagers of all types of washing or cleaning products, whether for industrial or household use.

TRY THE NEW D-40 DETERGENT NOW

Contact nearest Oronite office.

ORONITE CHEMICAL COMPANY

38 SANSOME STREET, SAN FRANCISCO 4, CALIF. STANDARD OIL BLDG., LOS ANGELES 15, CALIF. 38 ROCKEFELLER PLAZA, NEW YORK 20, N. Y. 600 S. MICHIGAN AVENUE, CHICAGO 3, ILL. 824 WHITNEY BUILDING, NEW ORLEANS 12, LA.



POWDER

C-P-P Earnings Rise

Colgate-Palmolive-Peet Co. reports earnings of \$3,676,918 for the quarter ended March 31, 1950, compared with \$3,529,888 for the comparable 1949 quarter. Sales should continue this year at about the same level as in 1949, E. H. Little, C-P-P president, told stockholders at the annual meeting. The company started national distribution of its new "Fab," heavy duty detergent for washing clothes, on April 1. "Our business is changing very rapidly from a soap business to a synthetic detergent business," he observed, "even more rapidly than we expected only six months ago." This trend may shortly require further additions to plant equipment, he indicated.

Sees Higher Detergent Sales

Record production of perhaps a billion pounds of synthetic detergents in 1950, as compared with 800,-000,000 lbs. in 1949, is predicted by Daniel H. Terry, technical service manager for Antara Products Co., New York, in an article in the April 10 issue of the New York Journal of Commerce. Future trends in synthetic detergent sales, he predicted, involve the spray-drying of liquid non-ionics and the addition of foaming qualities to them. Mr. Terry also predicted development of a practical synthetic detergent bar, and also germicidal soap bars based on synthetics. Another trend, he reported, is already in full swing, and may be expected to continue to develop, particularly if fat prices rise, that is the building of soap by incorporation of synthetic detergents.

Lab Glassware Detergents

Two new inhibited detergents for washing laboratory glassware have been developed by Wyandotte Chemicals Corp., Wyandotte, Mich. "Dural H" is designed for hand washing, while "Dural M" has been developed for machine washing. Both products are designed to produce little or no etching, dissolving laboratory glassware at rates from two to 33 times more slowly than standard detergents.

Magnus, Mabee & Reynard, Inc., New York, Chicago, et al, continues to expand its storage and handling facilities for essential oils and other perfuming materials. Battery of new 480gallon stainless steel at the main MM&R warehouse in New York, used chiefly for U.S.P. essential oil storage. Two new 1650-gallon stainless steel tanks rigged up with portable pump and filtering device, also at the New York plant. Photos by Drix Duryea, New York.



Soap Controversy in Ohio

John P. Moore, a partner in Mutual Chemical & Supply Co., Columbus, Ohio, has lost his position as consultant to the Columbus Welfare Department, on the basis of charges that raw materials for soap manufacture were sold to the welfare department by Mr. Moore's firm at exorbitant prices.

Dermatitis Suit Upheld

The Springfield, Missouri, Circuit Court of Appeals recently granted judgment against a soap manufacturer who refused to divulge the contents of his product to a plaintiff who has brought suit against the manufacturer claiming damages for a rash alleged to have resulted from use of the defendant's product. Details of the case and decision are covered in Bulletin 24-50 of the Chemical Specialties Manufacturers Association, Inc., New York.

New Essential Soap

"Sof-Tutch," a new liquid soap for hand cleaning, was announced recently by Essential Chemicals Co., Milwaukee. The new cleaner is packaged in one gallon bottles, five gallon cans or drums of 15, 30 or 55 gallons each. The product is also available under private label. "Sof-Tutch" is described as a blend of vegetable and coconut oils, which contains additional ingredients for keeping hands soft. Standard colors are light gold and opal green; other colors available on special order.

Babbitt to Build

B. T. Babbitt & Co., detergent manufacturers, have announced plans to expand their Chicago manufacturing facilities by erection of another unit containing 30,000 sq. ft. The new structure will be located at 66th and Nashville Sts., not far from the original Chicago plant at 6233 W. 65th St.



we never sold a bar of soap...

but we sure make soap-selling scents



Maybe we don't know how to sell soap, but we have learned—from long and intensive study of consumer appeals—what kind of scents it takes. For twenty-five years in America, for more than half a century abroad, we have been producing soap-selling scents of distinction. If you favor the source of supply that sets the pace in soap perfumery, buy Givaudan. We can help you get more business with better "sales scents".

Greater Distinction through

Givaudan-Delawanna,

330 West 42nd Street, New York 18, N. Y.

Branches: Philadelphia · Boston · Cincinnati · Detroit · Chicago · Seattle · Los Angeles · Montreal · Toronto

Baker New Mathieson V. P.

Joseph E. Baker, general superintendent of the Niagara Falls, N. Y., operations of Mathieson Chemical



Corp., Baltimore, has been appointed vice-president, it was announced recently by Thomas S. Nichols, president. He succeeds F. Boynton Butler, general

manager of the operation since 1940, who retired at the age of 71. Mr. Baker has been with Mathieson since 1934, having started with the firm as a chlorine plant operator. He was later advanced to the plant development department and in 1941 was named general superintendent. He holds a Bachelor of Science degree from Iowa State College.

Fritzsche Ylang Substitute

The development of a synthetic replacement for natural Ylang Ylang Oil, which is virtually unobtainable, was announced recently by Fritzsche Brothers, Inc., New York. The new product is identified as "Basicol Ylang Extra," and is said to duplicate very accurately not only the basic odor of the natural oil but its characteristic toptones as well. It is also recommended as an extender of the natural oil and as a complete substitute for the genuine oil in direct proportion to the value of Ylang as a modifier of jasmin, violet, lily, lilac and general oriental blends. Its cost on the average is about one-half the natural oil.

Alsop Is 30 Years Old

The celebration of the 30th anniversary of its founding was observed recently with a banquet for all its employees by Alsop Engineering Corp., Milldale, Conn. Founded in 1920 as a one-man institution by the late Samuel Alsop in walk-up quarters in a rickety building on Water St. in downtown New York City, the company moved several times to larger quarters in various sites in New York. In 1936 the firm purchased its present building in Milldale, where it manufactures liquid processing equip-

ment that is used in the four corners of the world. Offices or distributorships are maintained in every important city in the U. S., Europe and South America.

Soap Co. in Wage Suit

The Quaker Soap Co., Secaucus, N. J., was recently named defendant in a wage and hour suit filed by the U. S. Dept. of Labor. The firm is charged with failure to pay overtime rates and keep required records of employees and work hours.

Ramelli Joins Sales Dept.

Rudolph Ramelli, Inc., New Orleans, soap and detergent distributors, recently announced the appointment of Rudolph Ramelli, Jr. to its sales department to cover sales in New Orleans, Mississippi, and along the Gulf coast.

AOCS Meets in Atlanta

The 41st annual meeting of the American Oil Chemists' Society will be held May 1-3 at the Atlanta Biltmore Hotel, Atlanta, Ga. A total of 26 technical papers will be presented, including a report on "The Comparison of Two Methods for Testing Detergents" by G. E. Barker and C. R. Kern, Atlas Powder Co., Wilmington, Del. V. C. Mehlenbacher, Swift and Co., Chicago, will preside at the business meeting.

Cos. Chemists Meet May 19

The annual meeting of the Society of Cosmetic Chemists will be held May 19 at the Savoy-Plaza Hotel, New York. Included in the program of technical papers is a report on methods of determining the effectiveness of dentifrices in reducing tooth decay, to be presented by Dr. J. F. Volker, Dean of the University of Alabama Dental School.

New Detergent Tablets

A new synthetic detergent tablet, "Syntho-Tabs," for commercial hand dish washing, walls, floors, etc., has been developed by Frontier Chemical Products, Inc., St. Louis.

Peet on Shell Board

E. Chester Peet, financial vicepresident of Shell Oil Co., New York, has been named a director of Shell



Chemical Corp., it was announced recently by J. Oostermeyer, president. He has been with Shell since 1919 and served in various executive capacities

prior to his appointment in January, 1949 as vice-president with overall financial responsibilities.

Form Canadian Atlas Firm

The organization of Atlas Powder Co., Canada, Ltd., was announced April 13 by Isaac Fogg, president of Atlas Powder Co., Wilmington, Del., and W. S. Sterne, president of G. G. Sterne & Sons, Ltd., Brantford, Canada. A joint venture of the Atlas industrial chemicals department and the Sterne organization, the new company is organized for the manufacture and distribution of Atlas industrial chemicals including detergents, emulsifiers, wetting and dispersing agents and other types of surface active products. W. S. Sterne is president and F. E. Sterne managing director. The company is making its headquarters at Brantford, where plans for the manufacture of certain types of Atlas industrial chemicals are under way.

Talks To Laundrymanagers

Eugene R. Day, laundry technician of Philadelphia Quartz Co., Philadelphia, addressed The Institutional Laundrymanagers' Association of Philadelphia at their March meeting. He spoke on the subject, "Alkalies—Methods of Application," pointing out that such factors as plant conditions, equipment and personnel determine the method of using washroom supplies most efficiently.

Buckeye Names Pfluger

Walter L. Pfluger and Assoc. have been appointed recently as New York representatives of the Buckeye Soap Co., Painesville, Ohio.

1950

PQ silicates step up

reference

uotient

Do eyes select your detergent package on the shelf, time after time? No hesitation and no substitutes permitted when the performance of the product lives up to claims made.

The preference quotient of soaps and detergents built with PQ Silicate is consistently high. They insure the user of these results—volume suds, improved soil removal, dirt fully suspended and rinsed away without redepositing. The outstanding efficiency of PQ Silicate properties continues to be utilized in the building of modern soaps and synthetics.

Ask for copies of recent technical articles on the effectiveness of silicates in soaps and synthetic detergents.

PHILADELPHIA QUARTZ COMPANY

1152 Public Ledger Bldg., Philadelphia 6, Pa.9 plants • Distributors in over 65 cities

for your detergents



PQ SILICATES BOOST YOUR DETERGENT'S PREFERENCE QUOTIENT

Hits No Rinse Washing

Full page advertisements headed "The Truth about 'No Rinse' Washing" to appear in 42 metropolitan daily newspapers were announced recently by Iowa Soap Co., Burlington. Part of the advertisement is devoted to a simple test to demonstrate the importance of rinsing to remove soil. According to the advertisement the claims allegedly made for no rinse products that clothes so washed won't turn yellow or "go grey" are false. In addition, the advertisement states that "actual tests prove conclusively that bacteria count of washing water with a one-suds 'no rinse' wash can be greater than under average and usual washing conditions. Each rinse used shows a progressive reduction in bacteria count found in washed garments. . . ."

The advertisement also devotes about half of its space to "Magic White" soap powder, which is claimed to be "pure soap—not a synthetic—no harsh chemicals." A premium offer of one piece of silver plate table service is included in each package of the product, which is said to contain a "sunshine ingredient."

Martin in Chiris Post

Frederick E. Shoninger, president of Antoine Chiris Co., New York, recently announced the appointment of Marius J. Martin as head of the manufacturing department of the company.

Mr. Martin joined the Chiris Company 34 years ago and since then has been actively associated with the manufacturing side of the business.

Drew Shifts Radding

Aaron Radding of Springfield, Mass., New England representative of E. F. Drew & Co., Boonton, N. J., was recently named field sales supervisor of the eastern section of the U. S. as far west as Chicago.

N.Y.U. Honors Deupree

Richard R. Deupree, chairman of the board of Procter & Gamble Co., Cincinnati, was honored recently by New York University School of Commerce, Accounts and Finance during its golden anniversary celebration in New York, April 10-11. The degree of Doctor- of Commercial Science was conferred on Mr. Deupree at a special session of the governing Coun-



R. R. DEUPREE

cil of the University. Mr. Deupree was one of the guests of honor at the Fiftieth Anniversary Ceremonial Dinner on April 11 at the Waldorf-Astoria Hotel, New York, in special tribute to a group of 50 outstanding industrial, business and financial leaders.

Edmon Returns from Europe

Harold J. Edmon, manager of the Naugatuck Aromatics Division of U. S. Rubber Co., New York, returned from Europe on the S. S. Caronia April 11th. Mr. Edmon spent several weeks visiting suppliers of natural oils and aromatics in France, Italy, Germany and England. While in Grasse he consulted with officials of Bruno Court regarding sales plans for their line of products which are handled exclusively in the U. S. and Canada by Naugatuck.

DCAT "Old Timers' Nite"

An "Old Timers' Nite," to pay tribute to former leaders in the Drug, Chemical and Allied Trades Section of the New York Board of Trade, will be held at the Hotel Astor Belevedere Roof, Wed., May 10. Dr. Elvin H. Killheffer is to be toastmaster, according to DCAT chairman Harold C. Green of L. Sonneborn Sons, Inc. Charles P. Walker of Citro Chemical Co. and the section activities committee have planned the affair.

Woolf Heads Kohnstamm

Louis J. Woolf has been elected by the board of directors as president and treasurer of H. Kohnstamm & Co., New York, to succeed the late Lothair S. Kohnstamm, it was announced recently. Mr. Woolf was formerly executive vice-president. Other officers elected were Charles D. Allen, a director, who was named vice-president in charge of the Brooklyn plant; Richard S. Carmel, a director, named as vice-president in charge of the chemical division and Robert A. Phair, also a member of the board, who was appointed secretary. Edwin A. Mayer was elected to the board and named assistant secretary.

Lauric Oil Imports Off

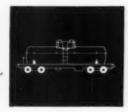
Imports of copra and coconut oil in terms of copra by the United States during 1949 showed a three percent decline, as compared with the previous year, and were 25 per cent under the 1947 figure. Last year, 519,-540 short tons of copra and coconut oil were imported by the U. S., according to recently released figures of the Office of Foreign Agricultural Relations. Copra imports were 428,230 tons, which was less than in the two earlier years, but 86 per cent above prewar. Coconut oil imports were 57,-525 tons, about one-third of the prewar 1935-39 average. Nearly 96 per cent of the 1949 U.S. copra-coconut oil imports originated in the Philippines.

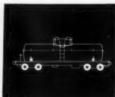
Palm oil imports are still considerably under pre-war. Last year, 41,170 tons, one-fourth of the 1935-39 average, were brought into the U. S. About 78 per cent: 29,600 tons, came from the Belgian Congo; 11,399 tons, the first substantial quantity since before the war, were shipped from Indonesia.

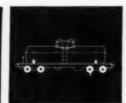
Megowen Heads Owens-Ill.

Carl R. Megowen, formerly executive vice-president was recently elected president of Owens-Illinois Glass Co., Toledo, to succeed J. P. Levis, who becomes chairman of the board. O. G. Burch, director of research, was elected a vice-president.

Wyandotte caustic soda











makes better detergents.

Whether the detergent you make is soap or synthetic, you can improve it with Wyandotte Caustic Soda. This high-grade chemical is used in the saponification of fats and oils, in old or new processes, and for the manufacture of synthetics with detergent properties.

Wyandotte Caustic Soda comes in different grades — each meeting definite standards of uniformity and quality. One manufacturer who had been using three different grades of a Caustic Soda learned of the specifications of Wyandotte Caustic Soda. He tried our "R" grade and found that he could use it alone, with attendant savings in inventory, storage facilities and handling.

If you would like to know more about modern procedures for analyzing certain alkali chemicals, write for the Wyandotte booklet, "Analysis of Caustic Soda, Soda Ash, Bicarbonate of Soda."

Wyandotte Chemicals Corporation
Wyandotte, Mich. • Offices in Principal Cities

SODA ASH • CAUSTIC SODA

BICARBONATE OF SODA

CALCIUM CARBONATE • CALCIUM CHLORIDE

CHLORINE • HYDROGEN • DRY ICE

SYNTHETIC DETERGENTS • GLYCOLS

CARBOSE (Sodium CMC) • ETHYLENE DICHLORIDE

PROPYLENE DICHLORIDE

AROMATIC SULFONIC ACID DERIVATIVES

OTHER ORGANIC AND INORGANIC CHEMICALS



RAW MATERIAL MARKETS

As of April 28, 1950

IXED changes took place in prices of fats and oils recently, with a somewhat lower level established than was the case earlier in the month. Oils that have gone higher than on April 5 were mostly edible vegetable oils, which made fractional advances. The release of government stocks of some of these oils has had an effect upon prices, and further talk of government releases is restricting if not stopping higher quotations on futures.

Apparently prices of coconut oil went out of reach of foreign buyers, and prices of the oil are now down 7/8 ths of a cent under the earlier April quotation. Coconut oil is now listed at 147/8 cents, as against 153/4 cents during the early days of the month. Copra has come down, too. It is now quoted at \$195 a ton Pacific Coast basis, as compared with \$212.50 in the early part of April.

Tallow, after a long stretch at the same price of 65% cents, is reported down to 63% cents, reflecting lower prices on other oils and continued substantial production.

Lard prices gained slightly. The commodity is now selling at 11.20 cents, as against 11.10 cents on April

Edible oils and fats prices that increased during the month include cottonseed oil, which is now quoted at 133/4 cents a pound. On April 5, cottonseed oil was 131/2 cents a pound. A year ago cottonseed oil was selling for 111/2 cents a pound. Also up is corn oil, the price of which has advanced from 14 cents on April 5, to the current quotation of 141/8 cents. Corn oil was 113/4 cents a pound a year ago. Soybean oil now at 131/8 cents a pound is up an eighth of a cent from the early April price, and two and one-eighth cents over its price on this day in 1949.

The exception to the upward trend in vegetable oil prices is peanut oil, which is now quoted at 147/8 cents a pound, as against 15 cents a pound earlier in April. Peanut is still selling for more than it was on this date a year ago, when it was listed at 131/4 cents a pound.

In its annual review number, the Fats and Oils Industry Report of the U. S. Department of Commerce points out that 1949 production of primary fats and oils from domestic materials of 11.6 billion pounds was 1.3 billion pounds larger than in 1948 and was the largest output in history. The volume of exports, the largest on record, amounted to 2.3 billion pounds, which was about two and onehalf times the 1948 total, and nearly five times pre-war average. Imports of 1.1 billion pounds were 155 million pounds smaller than the 1948 imports. The United States was on a net export basis by more than one billion pounds, in contrast to net imports of 353 million pounds in 1948 and an average of 11/2 billion pounds pre-war. Domestic consumption declined last year, as compared with the previous year. Factory and warehouse stocks of primary fats and oils rose to 2.1 billion pounds by the end of 1949, 465 million pounds more than 1948 closing stocks.

Production of fats and oils will continue large in 1950, according to the report. Output of inedible tallow and grease may be up from 1949 levels, as may be the case with lard and soybean oil. Cottonseed oil production is expected to be smaller.

Imports of copra and coconut oil in 1949 were 655 million pounds (oil equivalent), which was 20 million pounds lower than in the preceding year, and 225 million pounds lower than the record imports of 1947. Prewar (1937-41 average) receipts were nearly 700 million pounds in terms of oil. Coconut oil shipments in 1949

were 115 million pounds, about six million pounds greater than in the previous year. The Philippine Republic furnished 96 percent of the copra and 95 percent of the coconut oil. It is expected that production of copra and coconut oil in the P. R. will be greater this year than in '49, although no substantial improvement in export volume is expected because of increased domsetic demand.

Palm oil imports last year were 82 million pounds, about 19 million pounds greater than in the previous year, but still only one-fourth of pre-war.

Receipts of babassu kernels (in terms of oil) and babassu oil amounted to 33 million pounds in 1949, as compared with 42 million pounds in '48, and an average of 49 million in the 1937-41 period.

Further declines in the price of carnauba wax were recorded in recent days, the current quotation being in the order of 83 cents for the No. 1 yellow. This represents a decline of about four cents.

Cube Price Increase

The following new and higher schedule of prices on Cube Powder were announced recently by R. J. Prentiss & Co., New York:

per	lb.
Carloads, 40.000# min. and Truckloads, 20,000# min.	26c
20,000 lbs. and up—Firm contracts to be withdrawn as required in L.C.L. quantities	270
2,000 lb. lots up to 19,999 lb. lots	28c
Less than 500 lb. lots	
Basis 5% Pure Rotenone	

on approved credit
It is hoped through the increases to
stimulate shippers, growers and natives
in South America to raise, gather and
ship larger quantities of the material
than heretofore.

Packed in 50 lb. multiwall bags

Terms: 1% ten days, net thirty days,

schimmel

ROSAPONE S 4477

brings roses to your soap

This fresh, unusually strong, stable and lasting soap perfume is ideal for toilet soaps and shampoos.

Write us on your firm's letterhead for a sample.

schimmel & Co., inc. New York 1, New York

Babb New Lever President

ERVIS J. BABB, executive vice-president of S. C. Johnson and Son, Inc., Racine, Wis., has been elected president of Lever Brothers Co., New York, to succeed Charles Luckman. John M. Hancock, partner of Lehman Brothers, New York investment bankers, and director of a number of other firms, is the new chairman of the board. In addition, it was announced that a new board of directors composed of the following was elected at the company's annual meeting in New York on May 2:

William H. Burkhart, vicepresident of Lever Brothers Co.; J. Laurence Heyworth, director of Lever Brothers & Unilever, Ltd.; Franklin J. Lunding, president of Jewel Tea Co., Chicago, and chairman of the Federal Reserve Bank of Chicago; Charles A. Massey, president of Lever Brothers, Ltd., Toronto; Robert B. Smallwood, president of Thomas J. Lipton, Inc., Hoboken, N. J., and Louis F. Watermulder, vice-president of Lever Bros., Co. Mr. Lunding is chairman of the executive committee of the board.

Other vice-presidents of the company, as well as presidents and vice-presidents of the Pepsodent and Jelke divisions, and the president of Harriet Hubbard Ayer, Inc., New York, continue in their present positions. The new Lever president is expected to assume his post within 60 days.

JERVIS J. BABB



J. J. Babb, executive vice-president of S. C. Johnson Son & Co., named to succeed Charles Luckman. John M. Hancock, Lehman Bros., is new chairman. Franklin Lunding executive committee chairman.

Since Mr. Luckman's resignation on Jan. 18, the management of Lever Brothers Co. has been in the hands of an executive committee composed of Arthur Hartog, J. L. Heyworth and F. D. Morrell.

The new Lever president, Jervis J. Babb, a native of State College, Pennsylvania, has been with S. C. Johnson & Son, Inc., as executive vice-president and a director since 1944. He is also a director of S. C. Johnson & Son, Ltd., Brantford, Canada. A graduate of Haverford College, from which he received an A.B. in 1921, Mr. Babb did graduate work at the University of Pennsylvania in 1921 and '22. He was graduated from the Graduate School of Business Administration, Harvard University in 1924.

After graduation he was associated with the bureau of business research at Harvard Business School. He then spent two years in the merchandising division of General Electric Co., and was later associated with the New England Council. In 1931, Mr. Babb joined Standard Oil Co. of Indiana, where he held positions as manager of sales research and manager of retail sales. In 1941, he became vice-presi-

JOHN M. HANCOCK



dent and general manager of Booth Fisheries Corp., Chicago, where he remained until he joined S. C. Johnson.

Mr. Hancock, new Lever board chairman, was born in Emerado, N. D., and received his A.B. degree from the University of North Dakota in 1903.

He was named vice-president of Jewel Tea Company, Chicago, in 1919, president in 1922, and served as chairman of the board of directors from 1924-1942, being re-elected to the post in 1948. In 1924, Mr. Hancock joined the banking firm of Lehman Brothers as a partner.

The new chairman of the executive committee has been with Jewel Tea Co., Chicago, since 1931, prior to which he had been with the Federal Trade Commission. Subsequently he was named assistant to the president, executive vice president and president (in 1942). Born in New Hope, N. D., Mr. Lunding was a student at the University of North Dakota from 1923-26, receiving his LL.B. from George Washington Univ. Law School in 1929.

William H. Burkhart, vicepresident, and newly elected member of the Lever board, has been in the

FRANKLIN J. LUNDING



soap industry since he was graduated from the University of Pennsylvania with a B.S. degree in chemical engineering in 1921. In that year he joined Procter & Gamble Co., Cincinnati, serving in various positions there and in the New York office. In 1925, he joined Gold Dust Corp. and Hecker Products Corp., the following year being named manager of the company's Baltimore plant. In 1935, Mr. Burkhart was appointed director of manufacture of the company's soap division. Following its purchase by Lever Brothers Co. in 1939, he was named manager of the Lever Baltimore plant. He became general manufacturing superintendent at Cambridge in 1943, and in 1947, director of manufacture. Mr. Burkhart was named vice-president in charge of manufacturing and traffic for Lever Brothers Co. in mid-1949.

Another member of the board, J. Laurence Heyworth, brother of the company's chairman, Sir Geoffrey Heyworth, joined the foreign department of Lever Brothers and Unilever, Ltd., at Port Sunlight in 1910. Following World War I service he resumed his business career at Port Sunlight. In 1924, he was appointed to the chairmanship of Lever Bros., Ltd., Australia, a post he held for a decade, taking on, in addition, the chairmanship of Lever Brothers (New Zealand), Ltd., in 1929. Mr. Heyworth returned to London in 1934 following his appointment to the company's overseas committee and, in that capacity, subsequently traveled extensively through North and South America, the Orient, Australia, New Zealand and Africa. He was elected a member of the board of directors of the parent company on Jan. 1, 1938. Mr. Heyworth became a resident of Canada in 1940, returning to England in 1944 to become one of the company's contact directors responsible for overseas operations.

Charles A. Massey, one of those mentioned as a possible successor to Mr. Luckman, has been president of the Canadian branch of Lever Brothers since 1945. In addition, he has been president of the following firms: Birds Eye Foods (Canada), Ltd., Pepsodent

Co. of Canada, Ltd., Harriet Hubbard Ayer, Inc. of Canada, and a director of Thomas J. Lipton, Ltd. A graduate and practicing lawyer, who at one time headed his own law firm, Mr. Massey switched to the soap business in 1927, becoming assistant advertising manager of Lever Brothers, Ltd., in Toronto. Two years later he was named assistant to the president; in 1937, sales manager; in 1941, sales director and, in 1945, president of the Canadian branch of Lever.

Another member of the board is Robert B. Smallwood, president and director of Thomas J. Lipton, Ltd., of Hoboken, N. J., an affiliated company of Lever Brothers. He is a graduate of the University of Ohio, 1917, a veteran of the first World War, a former

sales manager of the Borden Company, prior to joining Lipton in 1938.

Louis F. Watermulder, also a newly named member of the board of directors of Lever Brothers, was graduated from Yale University, where he was elected to Phi Beta Kappa, in 1923. The following year, subsequent to post-graduate studies in law, he joined the Northern Trust Company, Chicago, eventually becoming second vice-president of the bank. He joined Quaker Oats Co., with headquarters in Chicago, in 1939, as assistant treasurer, becoming treasurer in 1942. He served also as director of Quaker Oats Co. of Canada, Ltd., and Quaker Oats, Ltd. In September of 1949, Mr. Watermulder joined Lever Brothers Co., as administrative vice-president.

New Lever N. Y. Headquarters Under Way

ONSTRUCTION of Lever House, the new headquarters in New York of Lever Brothers Co. is expected to be started shortly. Plans for the 21-story glass and stainless steel building, to be erected at 390 Park Avenue, occupying the entire west side of the block between 53rd and 54th Sts., were announced early in May. Demolition of the buildings now on the property is under way.

An arcade open to the street on three sides, and a glass and stainless steel main structure rising 19 stories from the third floor level but occupying only a quarter of the site, distinguish the building which is to have many unique architectural features. The unusual ground floor will have a garden in the center.

The second floor of Lever House will cover the entire lot, except for an open court directly over the ground floor garden.

The third floor, where the main structure begins, will contain an employee restaurant and recreation room, and will open on a landscaped terrace.

The structure, 302 feet high, will be of steel and concrete. The exterior skin will be entirely composed of heat resistant glass and stainless steel. Although it will have a blue tinge from the outside, the glass will appear colorless to those within the

building, and will filter out about 30 percent of the sun's radiant heat.

All mechanical facilities, including elevators, electric lines, stairways and ducts for complete air conditioning, have been designed for efficiency into a mechanical vertical core on the west side.

The building's entire 280,000 square feet will be occupied solely by Lever Brothers Co. and its Pepsodent Division, Harriet Hubbard Ayer, Inc., and Jelke Good Luck Products Division. Occupancy is scheduled for September, 1951.





THE following trade-marks were published in the April issues of the Official Gazette of the United States Patent office in compliance with Section 6 of the Act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, a fee of ten dollars must accompany each notice of opposition.

Sta-Same — This for shampoo for hair. Filed Jan. 24, 1947 by Jerry's Mfg. Co., Memphis, Tenn. Claims use since November, 1930.

BB—This for shampoo. Filed Feb. 3, 1947 by Hal Collins Co., Dallas. Claims use since Aug. 19, 1946.

Scarat—This for liquid rodent and other animal repellent. Filed Feb. 24, 1947 by Sparhawk Co., Sparkill, N. Y. Claims use since Sept. 1, 1946.

Friske Suds—This for soaps for dishes, etc. Filed Jan. 17, 1947 by Hilltop Laboratories, Minneapolis, Minn. Claims use since July 1, 1944.

Windo-Scentry—This for holder for moth repellent. Filed Dec. 16, 1946 by Wesco Products, Inc., Buffalo, N. Y. Claims use since Feb. 1, 1939.

The following trade marks are published in compliance with section 13 (a) of the Trade Mark Act of 1946. Notice of opposition must be filed within 30 days of publication and a fee of \$25 must accompany each notice of opposition.

Sparx—This for polishing liquid for furniture, automobiles, etc. Filed Apr. 9, 1949 by Higley Chemical Co., Dubuque, Ia. Claims use since Jan. 11, 1938.

Wonder Sac Silver Polish—This for fabric bag containing chemical in powder form for cleaning and polishing silver and other metals. Filed July 24, 1948 by Geo. P. Winterbottom & Son, Philadelphia. Claims use since January, 1939.

Broadway—This for shoe polishes and shoe cleaners. Filed Nov 13, 1948 by George J. Kelly, Inc., Lynn, Mass. Claims use since Apr. 30, 1920.

Prozite — This for cleaning abrasives for use in soaps and wetting agents. Filed Jan. 14, 1949 by Poor & Co., Chicago. Claims use since Sept. 1, 1948.

Cop-R-Tox—This for wood preservative. Filed Apr. 14, 1948 by Mobile Paint Manufacturing Co., of Delaware, Inc., Mobile, Ala. Claims use since June 1, 1946.

Devex "T" — This for insecticides. Filed Feb. 5, 1948 by Food Machinery and Chemical Corp., New York. Claims use since Jan. 17, 1948.

Trivex "T" — This for insecticides. Filed Feb. 5, 1948 by Food Machinery and Chemical Corp., New York. Claims use since Jan. 13, 1948.

Anataron — This for wetting agents. Filed July 1, 1948 by General Aniline & Film Corp., New York. Claims use since May 14, 1948.

Monsanto — This for wetting agents. Filed Aug. 28, 1948 by Monsanto Chemical Co., St. Louis. Claims use since May, 1935.

Air-Aid—This for chemicals for clearing air of odors and smoke. Filed Oct. 22, 1948 by Air Correctives, Inc., New York. Claims use since Oct. 11, 1948.

Busco — This for insecticides. Filed Nov. 3, 1948 by Buffalo Scientific Co., Buffalo, N. Y. Claims use since Sept. 3, 1927.

Buffex — This for swimming pool disinfectant. Filed Dec. 13, 1948 by American Swimming Pool Co., Chicago. Claims use since Oct. 1, 1948.

Kleensweet—This for liquid air deodorizer. Filed Jan. 3, 1949 by Liquid Veneer Corp., Buffalo. Claims use since Dec. 10, 1948.

Dazzle—This for ammonia for general cleaning. Filed Jan. 29, 1949 by J. L. Prescott Co., Passaic, N. J. Claims use since Jan. 29, 1948.

Hexamite — This for insecticides. Filed Apr. 30, 1949 by Food Machinery and Chemical Corp., San Jose, Calif. Claims use since Mar. 2, 1949.

Spots-Off — This for cleaning and spot remover sticks and powders. Filed Jan. 8, 1948 by Frederick M. Turnbull, Los Angeles. Claims use since Nov. 3, 1920.

Wyandotte — This for cleaning, cleansing and washing compositions. Filed June 24, 1948 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since May 13, 1899.

Q-Soap—This for soap for infants. Filed Oct. 27, 1948 by Q-Tips, Inc., Long Island City, N. Y. Claims use since July 16, 1948.

Detroline — This for chemical compound to be added to cleansing solvents. Filed Dec. 2, 1948 by Price Detergent Co., Shelton, Wash. Claims use since Mar. 15, 1947.

Chemiseal—This for wood preservative. Filed Oc. 21, 1947 by Chemiseal Co., Detroit. Claims use since Jan. 1, 1939.

Anatarane - This for surface

active agents. Filed July 1, 1948 by General Aniline & Film Corp., New York. Claims use since May 14, 1948.

Formula X-68—This for disinfectant. Filed Feb. 3, 1949 by John Sexton & Co., Chicago. Claims use since Dec. 21, 1948.

Thur-O-Aire — This for room deodorizer. Filed Feb. 10, 1949 by Rex Research Corp., Toledo, O. Claims use since Nov. 1, 1948.

Powco — This for insecticides. Filed Mar. 11, 1949 by John Powell & Co., New York. Claims use since July 1, 1948.

Pan-Thion — This for insecticides. Filed May 5, 1949 by Woodfolk Chemical Works, Ltd., Fort Valley, Ga. Claims use since March, 1949.

Norwich — This for antiseptic germicidal and fungicidal preparations. Filed Jan. 14, 1949 by Norwich Pharmacal Co., Norwich, N. Y. Claims use since May 22, 1925.

Foam-Vac — This for vacuum foam pick-up machines for cleaning rugs, etc. Filed Dec. 27, 1948 by Clarke Sanding Machine Co., Muskegon, Mich. Claims use since May 24, 1948

Gleam—This for liquid shampoo. Filed Sept. 27, 1947 by Hennafoam Co., New York. Claims use since September, 1941.

Young Quality—This for cleaner for removing rust, etc. in engine cooling systems. Filed Nov. 16, 1948 by Young Radiator Co., Racine, Wis. Claims use since June 8, 1939.

Manasco — This for soap dispensers. Filed July 11, 1947 by Max Nathan Supplies Co. of America, New York. Claims use since January, 1946.

Formula 27 — This for germicide. Filed Feb. 12, 1949 by John Sexton & Co., Chicago. Claims use since Jan. 18, 1949.

Fay Wood—This for shampoo. Filed Oct. 11, 1947 by Fay Wood Corp., New York. Claims use since Oct. 6, 1932.

Timeless—This for shampoos. Filed Jan. 19, 1948 by Dermetics, Inc., New York. Claims use since Aug. 20, 1947.

Beauty in the Morning — This for toothpaste. Filed July 1, 1948 by Universal Laboratories, Inc., East Orange, N. J. Claims use since June 4, 1948.

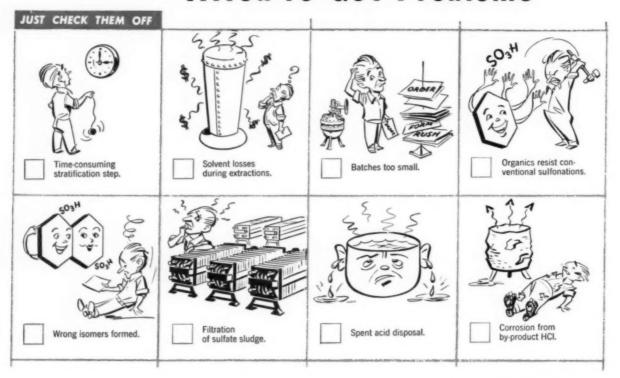
Cities Service—This for insecticides and fungicides. Filed Oct. 29, 1948 by Cities Service Oil Co., Bartlesville, Okla. Claims use since May, 1929.

Triclene—This for liquid metal degreasing solvents. Filed Dec. 23, 1948 by E. I. du Pont de Nemours & Co., Wilmington, Del.

Arthur G. Cailler, essential oil broker, died suddenly in Atlantic City, April 9. He had been in the essential oil brokerage business for 45 years.

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Deodorant Block Award

AMR Chemical Co., Brooklyn, received the award on an unspecified quantity of deodorant blocks with a bid of 16 cents in a recent opening for miscellaneous supplies by the Marine Corps, Washington, D. C.

Floor Machine Award

In a recent opening for miscellaneous supplies by the Army Engineer Corps, Chicago, Atlas Floor Surfacing Machinery Corp., New York, received the award with a bid of \$95.50 on 25 polishing and scrubbing machines.

Bri-Test Soft Soap Award

Bri-Test, Inc., New York, received the award on 144,000 jars of soft soap in a recent opening for miscellaneous supplies by the Armed Services Medical Procurement Agency, Brooklyn. The bids on which the award was based were: 19.5 cents, Atlanta; 21.2 cents, San Francisco; 17.9 cents, Schenectady, N. Y.; and 19.2 cents, St. Louis.

Fed. Sup. Chip Soap Awards

The following firms received the awards on an unspecified quantity of laundry chip soap in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C.: Eavenson & Sons, division Wilson & Co., Camden, N. J., item 51-S-1885, 9.32 cents, Washington, D. C. and 10.31 cents, Cleveland; Hershey Estates Soap Division, Hershey, Pa., item 51-S-1920, 11.23 cents, Washington, D. C., 11.34 cents, Cleveland and 13.48 cents, Fort Worth; General Soap Co., Chicago, item 51-S-1430, 7.5 cents, Chicago and 8.1 cents, Kansas City; Los Angeles Soap Co., Los Angeles, item 51-S-1920, 13.5 cents, San Francisco; Acme Soap Co., Cambridge, Mass., item 51-S-1430, 7 cents, Boston; Mount Hood Soap Co., Portland, Ore., same item, 8.9 cents, Seattle; Gillam Soap Works, Fort Worth, Tex., same item, 7.95 cents, Washington, D. C., 7.4 cents

Fort Worth and 7.45 cents, Denver; Procter & Gamble Distributing Co., Cincinnati, same item, 8.59 cents, New York, and 7.36 cents, Los Angeles; Armour & Co., Chicago, item 51-S-1655, 5.5 cents, New York, and 5.6 cents, Washington, D. C.; Swift & Co., Chicago, item 51-S-1885, 11.7 cents, Fort Worth, 11.57 cents, Denver and item 1655, 5.55 cents, Boston; Newell-Gutradt Co., San Francisco, same item, 4.55 cents, San Francisco; Peck's Products Co., St. Louis, same item, 5.58 cents, Kansas City, and Pioneer Soap Co., San Francisco, same item, 5.63 cents, Los Angeles.

Floor Wax Awards

Ace Chemical Co., Newark, N. J., and Trio Chemical Works, Brooklyn, received the awards on two floor wax items in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C. The award on item 52-W-400 went to Ace, with a bid of 51.84 cents; Trio's bids of 41 cents on item 52-W-420 and 47.3 cents on 405 were accepted on both those items.

Bomb Award to Edco

Edco Corp., Elkton, Md., manufacturer of greenhouse and industrial aerosols, has been awarded a contract to supply aerosol insecticide bombs to the U. S. Navy for the coming year, it was announced recently. The bombs are DDT-pyrethrum type and are made to joint Army-Navy specifications.

Navy Wax Cleaner Bids

Among the bids received on a wax cleaner in a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, were those of Davies-Young Soap Co., Dayton, O., item 1a, 58 cents; b, 92 cents, c, 66 cents; Walter G. Legge Co., New York, items 1a to c, \$1.60; Penetone Co., Tennfly, N. J., item 1a, 73.2 cents; b, 84 cents and c, 66 cents; R. M. Hol-

lingshead Corp., Camden, N. J., item 1a, 62.8 cents; b, 81.2 cents, c, 61.7 cents; Turco Products Co., Los Angeles, item 1a, \$1.40, b, \$1.49, c, \$1.53; Harley Soap Co., Philadelphia, item 1a, 49 cents and 51 cents, b, 66 and 68 cents and c, 47 and 49 cents.

Packaging Problem

(From Page 49)

this time would affect its merchandise value. However, the face of the container has been considerably enhanced by "cleaning up" the label and creating a strong more attractive presentation. The back of the canister has not only the new Rokeach Kosher seal, but also has a band of "IR's" running across the back panel.

The program of redesign was not confined to labels. A more distinctive and more practical shipping carton was developed, with the new Rokeach "IR" trade mark dominantly displayed. In order to help the store clerk identify the containers quickly, shipping cartons come in three easily recognizable categories, accomplished through the use of color. Cleanser products are packed in a carton with the "IR" against a blue background, and two categories of food products with red and green backgrounds.

Since it is common practice on split orders to the distributor to slit the shipping cartons in half, it was found that considerable spoilage resulted as the knife penetrated the contents. By the use of a printed line of demaracation, cutting of cartons without damaging contents of packages is possible. The new shipping design has the Rokeach identification on all sides, permitting quick product recognition and strong display in the warehouse, as well as with merchandise in the store.

The sales stimulus created by the new Rokeach packaging has already made itself felt, according to the company, with distributors and grocers alike indicating their enthusiasm for the new line. The quickly recognizable and attractive appearance of the new labels, plus an unusual trade mark have become the nucleus around which the Rokeach company's advertising and promotion will pivot.



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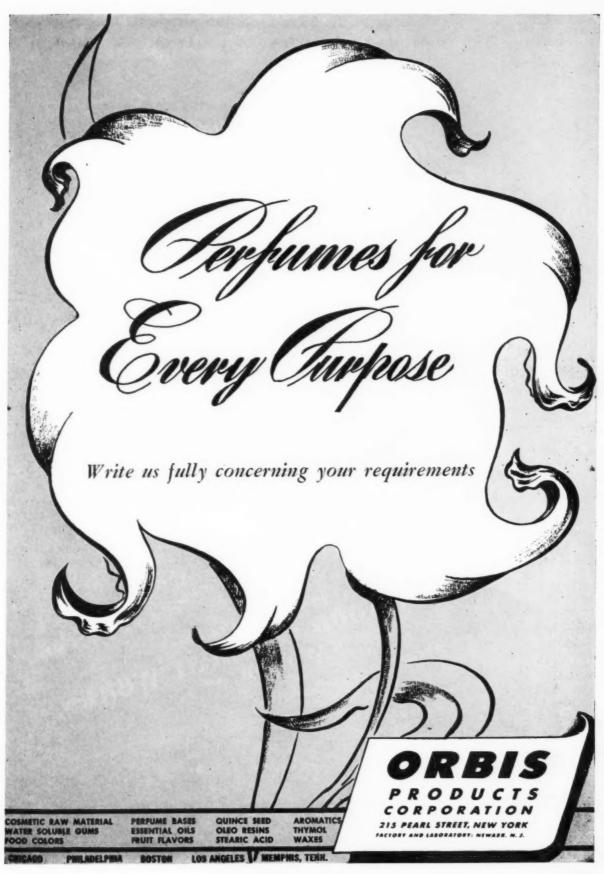
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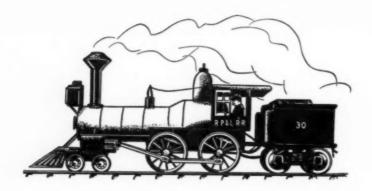
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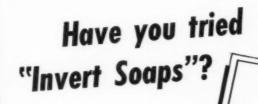
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PH 1310M-	AMINE C	AMINE O	AMINE S
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Surface tension 0.1% in 1% HCl		31.5	33

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PRODUCTION SECTION

Hints on Perfuming of Soap

ARIATIONS in perfumed soaps are recognized not only by the professional, but also, and more important, by the consumer and layman. Small differences in odor may be due to one of two main factors: (1) composition of the perfume itself; (2) variation in the transformation process of the soap, assuming that the soap finished the boil stage satisfactorily.

The amount of perfume used in soap is relatively small, and thus it is hardly practical for the soapmaker to try to formulate his own perfume, since he is not equipped for such an operation, and probably could not put out a satisfactory product economically.

The soapmaker who has tried to economize by making his own perfumes, perhaps on the theory that he wishes a specialized essence, has usually found that the material varies from batch to batch. Perfume quality suffers, natural oils purchased in small quantities vary in composition which precludes the possibility of the soap manufacturer putting out a uniform product. Usually the soapmaker does not have adequate testing equipment to control the perfume quality. The purchase of such equipment would involve too great an expense to be worthwhile.

Where quality is determined by the transformation of the basic soap, control of alkalinity is a prime factor in producing a satisfactory finished soap. A perfume will give a stable note only if variations in the free alkalinity of the finished soap are held within three to five per cent. This control is difficult to maintain. Where Small differences in the odor of perfumed soap may be caused by the composition of the perfume itself or variation in the transformation process of the soap. For stability, free alkalinity should be within 3 to 5 per cent.

60 per cent basic soap is hardened in forms, then passed to drying frames via the chipping machines, an .06 per cent alkali is required; if passed over a cooling machine, the alkali allowance is .08 per cent; while a soap going over cooling cylinders requires .6 per cent. The variation in cooling method, i.e., cooling rate, produces different structures in the soap. Smaller soap crystals yield a clearer harder soap from which water evaporates more quickly. The more rapid the removal of water, the greater the per cent of alkali transformed.

Fear of an excess alkalinity is responsible for most weakly alkaline soaps. It should be noted, that if the above limits are observed, the alkalinity is of no importance as compared with the hydrolytic separated alkali.

Neutral soaps may be prepared with some alkalinity because there will be some loss in further processing. Superfatting agents are particularly useful in tempering alkalinity where it still exists, however, they should have as little odor as possible.

Chips leaving the drying frame have a temperature of about 55° C. They should be allowed to cool. This is best accomplished by feeding the chips into a tower counter current to an air supply. The chips pass through the tower by means of a screw type

mechanism which rotates and keeps the chips in motion, allowing good contact with air.

Too rapid cooling of the chips causes swelling with the evolution of heat and possible carbonization, often accompanied by a musty odor, which may ruin the whole batch. The tower should be large enough to handle the charge adequately. Aging periods should be constant and not more than 48 hours, since contact with air causes further transformation of free alkali.

A common error in manufacturing operations today is to add the perfume to the chips in the mill on the theory that too much of the essence is lost when it is added in the mixing unit. This assumption is not true, since the perfume is not absorbed immediately by the soap. When the perfume is added in the mill it covers the cylinders and due to its oily nature prevents the soap from contacting the cylinders satisfactorily. Furthermore, the hot rolls tend to evaporate the perfume, causing a greater loss of the essence.

Water cooled steel cylinders in spite of their higher initial cost are preferred to the porphyry type. Water cooling permits control of roll temperature, reducing loss of perfume by evaporation.

The perfume should be allowed 10 minutes in the mixing machine for

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WHENEVER THE NATURAL OILS ARE TOO COSTLY

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adequate dispersion, and the cylinders in the mill should be maintained below 20° to 25° C. The best temperature of the plodder is that which allows the bar to leave in as smooth a form as possible. This temperature may range from 40° to 45° C. depending on the fatty acid content of the soap. Alchimist 4, No. 2 31-35 (1950).

Deodorized Chrysalis Oil

Chrysalis oil is deodorized by the addition of 0.5-1.0 per cent of stannic chloride and heating to 120-200 °C. The product is suitable for making soap. M. Hamashima, Japanese Patent No. 172,661; through *Chem. Abs.*

Water Softener Adjunct

A valuable coagulant in precipitation methods of water softening, as the lime and lime soda methods, is a "modified silicate" used with aluminum sulfate. Modified silicate is the term used to define a colloidal form of hydrated silica which may be formed by reacting sodium silicate solution with a dilute sulfuric acid. Applied to waters low in magnesium, it imparts better coagulation and settlement of precipitate, since it produces large flocs which agglomerate the fine precipitate, causing it to settle rapidly. R. R. McDowell. Industrial Chemist 26, No. 301, 51-55 (1950).

Glycerol Distribution

For all practical purposes, glycerol retention in the soap curd layer equals the concentration in the soap lye layer. However, investigations of several experimental boils indicate variance in glycerol distribution with different boiling conditions. When boiled on a soft grain, the glycerol to water percentage in the curd relative to that in the lye, was about one to one. Boils on a medium or hard grain consistently ran higher, from as much as 1:1.2 to 1:1.3. The greater retention in the hard grained lyes may be due to a better mixing of the two layers in the case of the hard grain. J. Am. Oil Chem. Soc. 27: No. 2, 44-45 (1950).

Soap Dispersing Agents

Pigment dispersions may be produced by using surface active agents in pre-treatment operations during manufacture, or in final application. Soaps, RCOONa, although not the best of dispersing agents are used frequently because of their reversibility. Substitution of sodium by calcium or barium changes the dispersing action into a flocculating action. Sodium rosinate is often used in this manner in the manufacture of pigments and the flocculated suspension on adding calcium or barium salts filters readily and may be dried to a soft powder which disperses easily in Sulfated oils and alcohols, ROSO Na, are poor dispersing agents unless used in excess. H. Lomas. J. Soc. of Chem. Ind. 68, No. 2, 37-40 (1950).

Fatty Acids in Britain

A new fractional distillation plant for the separation of fatty acids has been erected in Lancashire and is expected to be in operation early this year. The plant is the subject of a license agreement with Armour & Co. and will be the first of its kind outside the United States. In essence the technique is very similar to that of petroleum fractionation. Four fractions are obtained:

- An overhead fraction including odor and unsaponifiable matter.
- 2. Acids of medium boiling point.
- 3. Acids of high boiling point.
- 4. A residue.

High vacuum and close control of heating insure that the products are not decomposed at the high temperatures involved. The process will produce fatty acids ranging from C-8 to C-22 of up to 90 per cent purity if desired. The Chem. Age 61, 410 (1949).

Detergents in Sewage

The disposal of effluents containing synthetic nonionic detergents was studied. They appear to pass through the sewage purification processes unchanged and consequently are discharged into the rivers. As the presence of surface-active agents may affect the fish and plant life in rivers,

two aquaria were set up containing aquatic plants, snails, and bronze carp. Different amounts of detergent were added, and finally the fishes and plants were living in water containing five parts per 100,000 of "Lissapol N," a nonionic, for four months, without showing any signs of distress. All the fishes and plants appeared to be healthy and flourishing at the end of this period.

Replacement of soap by nonionic detergents will not necessarily increase the load for biological purification in sewage-disposal works. They pass through bio-aeration processes unaffected, but will have no ill effects on river flora and fauna. L. W. Oldnam, Chemistry and Industry 40, 680 (1949).

New Soap Antioxidant

An amino compound, ortho biphenyl biguanide, effective in restraining the oxidation of soaps, is described in a bulletin just announced by Monsanto Chemical Co., St. Louis. Characteristics of "SA-326," and how to use it in bar, cake, flake, chip or powder and liquid soaps are included.

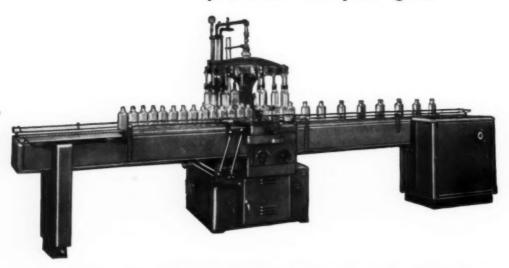
Sulfates in Shampoos

Fatty alcohol sulfates used in shampoo formulations are usually sulfates of mixed fatty alcohols. It has been found that a sulfate prepared from a very pure fatty alcohol does not possess the desirable detergent and foaming characteristics which are developed in a product made from a mixture of fatty alcohols.

Materials are added to shampoos to improve their final effect on the hair and to enhance their appearance and appeal to the customer. Sodium stearate acts as a thickener in paste type shampoos, although the potassium stearate is preferred for certain liquid cream shampoos. Magnesium stearate serves as a whitener, while cetyl alcohol acts as a stabilizer and whitener. Polyvinyl alcohol, methyl cellulose and sodium alginate are added to increase viscosity and as protective colloids. R. Pantaleoni et al. Soap Perfumery & Cosmetics, 23, No. 2, 168-171 (1950).

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Foam Characteristics

Foaming is not always an indication of soap or other detergent solution, for example "foam" accompanying running or falling water. In the latter case, air is trapped by the gravitational force of the water, forming minute air bubbles. The foam may be considered as a system of laminae, enclosing air bubbles in their interstices, similar in many ways to a concentrated emulsion.

Another non-soap, foam producing compound is China Clay, which in a colloidal state has physical properties similar to those of soap. It lowers surface tension, increases viscosity, and absorbs dirt and grease as does soap. Furthermore, it lathers and has the power of emulsification. Like soap, its lathering power increases in the presence of small quantities of alkali, but falls off with the higher alkali concentrations, due to salting out. The clay functions more as a soap substitute, and is not a filler; however, added to soap, it increases the lathering power by about 40 per cent over the pure soap product.

The main quality of lather is "elasticity," i. e., a quick and variable surface tension. Small bubbles of foam yield lather of a more creamy consistency and with better emollient and soothing effect on the skin. The lathering tendency is difficult to determine, but since the time for it to subside is the more important characteristic, it is used as the unit of measurement. Soap (India) 2, No. 11, 4-9 (1949).

Detergent Analysis

Electron microscope and X-ray diffraction studies of soaps indicate that each type of soap molecule has characteristic features which can be used for its identification and analysis. Furthermore, data obtained in these investigations offer an explanation as to the mechanics of cleaning and suggest a basis for evaluating the detergent powers of soap. The most characteristic feature of the electron micrographs for pure soap is an interlocked mesh of fiber bundles of varying diameters and having different degrees of twist, with a general

tendency to retain both a criss cross and parallel structure.

Micrographs of total soap reveal distinct forms for both sodium palmitate and sodium oleate, thus serving well in identification. Differences in structural arrangement between soap and soap phases may be determined by examining surface details. X-ray diffraction studies permit identification of molecular arrangement, nature of molecular packaging in soap crystals and identification of the various phases in commercial soaps. Application of these methods of analysis permits identification of commercial soaps of unknown composition. Chem. Age 61, 844-847, Dec. (1949).

Causes of Dermatitis

The effect on human skin of soaps made with low-titer fatty acids or sodium sulfonate detergents, and a urea-formaldehyde polymer filler was examined by patch testing and continued use. No significant difference was observed between the action of soaps filled with urea-formaldehyde polymer and other soaps. Cases of dermatitis that were observed were caused by the fatty acids used and not by the resin. W. Schneider, Deut. med Wochschr. 74, 741-5 (1949); through Chem. Abs.

Action of C.M.C.

Perhaps the most significant modification of synthetic detergents has been the addition of sodium carboxy methyl cellulose, generally abbreviated to C.M.C. The material is strongly adsorbed on cotton, and the adsorbed layer has projecting carboxy groups which are believed to function in effect as anchors to establish the adsorbed molecular layer, which is understood to be the characteristic feature of such detergency. Without these projecting carboxy groups the detergent molecules of synthetics are not sufficiently strongly adsorbed on the cotton fibre, nor are they sufficiently rigidly held by a colloidal structure, to form the appropriate molecular layer. A. L. Waddams, Chemistry and Industry 46, 783-8 (1949).

Det. Suspending Power

The amounts of channel black and furnace black remaining in suspension after four hours were determined as a function of concentration in solutions of "Aerosol OT," "Oronite Active," "Triton X-100." paratoluenesulfonic acid, and sodium oleate, with and without added acid, base, or salts. In all cases the curves went through a maximum, although marked differences were found in the shapes of the curves and in the concentration necessary for maximum suspensibility. Simple electrolytes behaved similarly to the detergent solutions but with the maxima in the curves occurring at much lower concentrations.

The mechanism of suspension, deduced from the above data and confirmed by the electron microscope, is deflocculation of the coarse aggregates formed in water. This seems to be effected primarily by the zeta potential induced on the powder, which involves adsorption of simple ions or molecules. Consequently consideration must be given to the chemical nature of both powder and detergent for prediction of results. The colloidality of the solution appears to be important only as it affects the concentration of simple ions and molecules.

Evidence is presented that the ability of a solution to suspend the solid powders used in this work, manganese dioxide, and two forms of carbon black, is not a satisfactory measure of its potential detergent power. R. D. Vold and C. C. Konecny, J. Phys. and Colloid Chem. 53, 1262-79 (1949).

Synthetic Perfume

In the presence of suitable condensing catalysts, ketene will react with aldehydes and ketones to form β lactones. These, and the methyl alkyl ketones might comprise compounds with useful odors, adding to the resources of the perfumer. Suitable catalysts include boric acid, triacetyl borate, mercuric chloride and magnesium perchlorate. Manuf. Chemist, 21: No. 1, 9, 1950.

THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. It is more economical to use, on the basis of both Na2O (alkalinity) and SiO2 (silicate) than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself. DRYMET contains no water of crystallization.

DRYSEQ

THE ALL-PURPOSE DETERGENT SILICATE

Cowles DRYSEQ, anhydrous sodium sesquisilicate, is a medium pH alkaline cleaner which will do fast, dependable work at a low cost to the user. It is a white, free-flowing powder, quickly and completely soluble in hot or cold water-containing 56.75% Na₂O-making it an economical base material for compounding.



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THE HEAVY-DUTY DETERGENT SILICATE

Cowles DRYORTH, anhydrous sodium orthosilicate, is a powerful, speedy, heavy-duty cleaner with valuable penetrating and wetting-out properties, reinforced dirt-removing power and unusual emulsifying action. It is an anhydrous, free-flowing powdered silicate containing not less than 60% Na₂O, which may also be used as an economical constituent of high pH cleaning compounds.

CRYSTAMET

THE MEDIUM PH DETERGENT SILICATE

Cowles CRYSTAMET is a pure, perfectly white, free-flowing granular pentahydrate sodium metasilicate with the normal 42% water of crystallization. Suggested for compounding when it is desirable to lower the concentration of a finished product. Readily

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COWLES CHEMICAL COMPANY

HEAVY CHEMICALS DEPARTMENT . CLEVELAND 3. OHIO

PRODUCTION CLINIC

By E. G. THOMSSEN, Ph.D.

LL of us, at some time or other, have moments when we become discouraged. During such periods the tonic which peps us up most is encouragement from others. Under this stimulation we take heart again and carry on our daily tasks with greater determination. It is our observation that most of us overlook the advantages offered by encouragement in accomplishing a desired goal in the handling of factory help. Heartening words and gestures toward plant personnel result in dividends of gratitude and better work.

What goals can be reached through giving encouragement to employees in their work or other interests by a proper approach? Most foremen or factory superintendents have reached their positions by advancing through the ranks. Other positions of importance in a plant: chief mechanic, chief engineer, shipping clerk or woman leader of a production group are generally awarded to capable persons on a promotion basis. When employees are encouraged by the knowledge that good, efficient work will result in promotion, they put forth better effort.

On the other hand, when nepotism or "pull" through friendship, membership in the same lodge or church and/or similar reasons are the bases for promotion, discouragement, disappointment and resentment follow. These attitudes reflect themselves in poorer grades of work. The idea of getting even with the company for an injustice is fomented. It is true that unions put greater emphasis on seniority than ingenuity and ability, but nevertheless in most plants there are executive type positions, qualifications for which include intelligence and good service in workmanship.

Another method used to encourage factory personnel is by offering free instruction, particularly in fields of knowledge that pertain to a particular plant. Such education is entirely voluntary and dependent upon



DR. THOMSSEN

the number of employees attending classes. It has paid good dividends to both employer and employee, when properly conducted. We know of a certain company whose very efficient sales force was almost entirely drafted from former factory employees with sufficient ambition to attend regularly courses in salesmanship offered by the company and who were sales minded. The factory experience of these salesmen made them better able to meet sales problems than others who were hired from the outside. It is not at all uncommon for factory help to yearn for the opportunity to sell the product they make and especially so if they are sold on it themselves.

Cupidity is a characteristic of all of us. We have been told by factory people on many occasions that they were interested most in what the pay envelope contained. While wage scales have risen rapidly in recent years, because of the decline in the value of the dollar, the purchasing power of pay increases is correspondingly reduced. It is becoming increasingly necessary for industrialists to invent some method other than through pay raises gained through collective bargaining to satisfy employees. Profit sharing is proving satisfactory.

In a certain company the wholehearted cooperation of employees, even though unionized, resulted in bonus payments as high as 50 per cent, with dividends paid to stockholders as well. This was made possible by increased efficiency and greater productivity per worker. Plans for the better production methods were worked out at regular meetings of an employees' council and management. Both sides discussed their problems frankly and sought to remedy the weak spots in production and executive functions of the business. As a result of this cooperation strikes have been averted, labor turnover has been very small, and quality of finished products has been improved and costs kept down. The stockholders are as pleased with the plan as the employees.

Another method of encouragement in a plant is through publicity. Ego is natural to all men and women. When we are responsible for a certain accomplishment we like to have our fellow men know about it. To see one's name in print gives one a lift. Alert production executives are aware of this trait and encourage better work among factory men by publicity or public awards for superior workmanship. The method of carrying out such a program must be adapted to specific plants but it is a point that should be stressed in stepping up production.

These are but a few of the devices used to buoy morale of factory help. There are others, such as insurance, credit unions, entertainment, outside social visits, health programs, correct food and refreshments, and retirement funds. Such programs should never be one-sided propositions or suspicion may crop up and wreck a well intended plan. All interested parties should be represented equally and consulted no matter how trivial may be the question which arises.

The "Gyro-Whip" and "Super Sifters" made by Richmond Manufacturing Company, Lockport, N. Y.,

25



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In these competitive days, the appearance as well as the performance of a cleaning compound is important.

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This superior detergent and wetting agent is white in color and makes a clear, practically colorless solution. Here's a simple test that strikingly demonstrates this quality. Simply dissolve a sample of Kreelon and one or a number of other detergents in separate beakers of water. Hold them up to the light. Note the clarity

of the Kreelon solution. Compare it with the hazy, "muddy" appearance of most other detergent solutions.

Wyandotte "high-light" Kreelon is made under rigid manufacturing specifications. It provides maximum detergency (soil removal and whiteness retention). And Kreelon contains a minimum of 40% active agent.

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SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA
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DICHLORIDE • AROMATIC SULFONIC ACID DERIVATIVES
OTHER ORGANIC AND INORGANIC CHEMICALS



are reported to be giving good results in many plants. These sifters provide accurate separation of particle size down to 0.0053 in. without retaining any of the fine material in crevices or ledges causing contamination. They operate efficiently in small floor space, at low power costs. Construction is designed to reduce or eliminate maintenance costs due to corrosion, abrasion and leakages of dust.

Narrow Aisle Sweeper

PLANTS which use power sweepers in narrow aisles will find it to their advantage to investigate a machine especially designed for sweeping narrow places. The sweeper contians a 24" revolving brush. It turns within a compartment that hugs the floor and transmits the sweepings into a heavy fabric bag by vacuum. There are two operating speeds. One man may cover up to 45,000 square feet per hour. The machine is claimed to be easy to operate. It is made by G. H. Tennant Company, Minneapolis 11, Minn.

Speed Reducer

A 15 TO ONE speed reducing device that is easy to mount is now avialable from Dodge Manufacturing Company, Mishawaka, Ind. It may be fastened directly on the driven shaft without the use of a foundation or flexible coupling. Belt tension is readily adjustable. This reducer is particularly well adapted for driving conveyors, bucket elevators, agitators and slow moving processing machinery. As the smallest unit weighs only 35 lbs., it may be switched to drive more than one piece of machinery if desired.

Wax Emulsifier

SHARPLES CHEMICALS, INC., Philadelphia, are featuring their "Diethylaminocthnol 246" as a wax emulsifying agent when made into an amino soap with fatty acids. It is claimed that greater water spot resistance is attained by its use because this amine evaporates with the water from the wax film after application. Liquid floor waxes will not gel even under rather extreme conditions. This

product is priced to compete with other emulsifiers. Prices and technical information may be had directly from the company.

Valve Lubricant

ROCKWELL Manufacturing Company, Pittsburgh, Pa., makers of the Nordstrom valve, have announced an advancement in its lubrication. This new lubricant seals automatically and continuously. It assures economy in lubricant and longer life for the valves. Twice as much of this new product can be compressed into the lubricant chambers. It positively both seals and lubricates the valve in a second. A bulletin regarding this product may be had upon request.

Maintenance Conf. Report

Proceedings of the first Plant Maintenance Conference held in Cleveland, Ohio, in January are compiled into a two-volume text of 278 pages (8½ x 11") including 47 pages of tables, diagrams and illustrations. Questions submitted by the audience are answered in the second volume. Subjects covered in the discussion include: maintenance organization and principles, upkeep of floors, walls and roofs, sanitation and housekeeping, lubrication, etc.

The text is published by Clapp & Poliak, Inc., 341 Madison Ave., New York, and sells for two dollars.

New Hudson Folder

A folder on its wheel type sprayers and dusters was issued recently by H. D. Hudson Manufacturing Co., Chicago. At the same time the firm announced a new dealer price list on its spraying and dusting equipment.

Shown and described in the sixpage folder are the Hudson "Porta-Spray" in copper and galvanized iron, the "Sunshine Porta Sprayer," the "Peerless" power spray, the "Porta-Duster," the "Defender" and "Clipper" models. Also shown are the hooded spray boom and the "Speedee-Boom." Specifications for the company's compression sprayers on wheels are listed in tabular form and details

New Ungerer Price List

A 24-page booklet on its line of essential oils, aromatic chemicals and flavors was issued recently by Ungerer & Co., New York.

Hardesty F. A. Catalog

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Issuance of a new, 24-page catalog of fatty acids was announced recently by W. C. Hardesty Co., New York. Specifications and shipping data on a complete line of fatty acids, including stearic acid, red oil, animal and vegetable and fish oil fatty acids, stearine pitch and glycerine are listed. Also included are three data charts showing composition of fats and oils, color standards comparator and temperature conversion tables. Copies are obtainable by writing the company at 41 E. 42nd Street, New York 17.

Revise Glycerine Standard

Revised standards for glycerine are contained in the new United States Pharmacopoeia, it was reported recently by the Glycerine Information Service. The main change is the inclusion of a test for chlorinated compounds. The test is carried out by refluxing the sample of glycerine with morpholine for three hours and then acidifying with nitric acid. The turbidity produced by the addition of silver nitrate is then compared with a blank containing a known quantity of hydrochloric acid.

Koppers Resorcinol Data

A new 40-page technical bulletin on its resorcinol was issued recently by the chemical division of Koppers Co., Pittsburgh. An extensive revision and enlargement of a previous technical bulletin, the new version gives technical information, including physical properties, and data on the chemical's solubility in common liquids. In addition, commercial information on resorcinol as to grades available, containers, handling and storage, is included. Copies are available by requesting Technical Bulletin C-9-124 from Koppers Co., Chemical Division, Pittsburgh 19.

on the "Ideal" and "Sunshine Porta-Sprayers" are also included.



he Maestro knows the score. Skilled Perfumers do tool It takes creative know-how and long experience to produce correctly blended ingredients that will give your product a personality all its own and increase its sales potential. We have the experience, the facilities, and the master's touch to help you improve a product or create a new one. We welcome the opportunity to serve you.

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New D&O Catalog

Dodge & Olcott, Inc., New York, recently issued a 48-page catalog covering its line of essential oils, aromatic chemicals, perfume bases and related specialties. Included also in the current catalog is a section devoted to the de Laire division's perfume specialties.

Breuer Machine Details

The recently announced "Tornado" all-purpose floor machine, made by Breuer Electric Manufacturing Co., Chicago, and illustrated in our April issue incorporates a number of new features. These include: rotary safety-grip switch, finger tip solution control, fully adjustable handle, self-raising wheels, automatic brush coupler, "foam-feed" brush design and quick-change, snap-on brush rings.

An important new feature of the machine are the replaceable brush rings. Made up of individual, concentric bristle rings, brushes may be replaced easily by any operator when the need arises. Only one metal brush back is required. The bristle rings are secured to the brush back by strong steel clamps and replacements or changes can be made easily.

The method of attaching the brush to the new "Tornado" floor machine is said to have been simplified and made completely automatic. It is necessary only to place the brush on the floor, move the machine over it and lower into place. When the switch is turned on the brush locks automatically. A slight push with the foot when the machine is stopped releases the brush.

Additional cleansing properties are claimed for the new "foam-feed" brush design, which is said to provide even distribution of solution over the entire working area when the onefinger solution regulator is turned on.

The handle of the new model is fully adjustable and contains rotary action, safety-grip switch that may be placed in a vertical position for compact storage, etc. The self-raising wheels draw up with a lift of the handle.

The new "Tornado" floor machine can be used for scrubbing, waxing and polishing, as well as for steel wooling, pumicing and removing floor stains, etc.

Pulva-Sizer Folder

A four-page folder describing and illusrating its Model B "Pulva-Sizer" was announced recently by Pulva Corp., Perth Amboy, N. J. Many features incorporated in the design and construction of the new pulverizer made by the concern are listed in the folder.

Daniels Basket Price List

C. R. Daniels, Inc., Daniels, Md., recently issued a four-page, illustrated price list on its line of basket, hampers and trucks. Price reductions have been made on a number of items, principally canvas baskets, hampers, trucks and accessories, according to W. E. Garson, manager of the firm's basket division.

Set Speed Motor

Sterling Electric Motors, Inc., Los Angeles, announced recently that their variable speed "Speed Trol" motor is now available with provision for sealing speeds at a positive setting or within any predetermined range of speeds. The motor is available also in white finish for use in plants where sanitary conditions must be observed. Mounting dimensions of the motor are interchangeable with NEMA standard motors. The new "Speed-Trol" unit is totally enclosed and is said to be splash-and drip-proof.

New "Speed-Trol" motor (below) is totally enclosed, is said to be splash and drip-proof. An important application of this unit is for driving pumps, agitators, mixers, blenders, grinders, etc., or for use in any process where control of speed will improve quality or quantity of production.



New Ungerer Price List

Ungerer and Co., New York, recently announced the issuance of a 32-page price list for 1950 on its line of essential oils, aromatic chemical and related perfuming and flavoring materials.

New Bottle Dispenser

The development of a glass measuring flask dispenser that attaches to stoppers of bottles and speeds up the addition of predetermined amounts of reagents in laboratory procedures was announced recently by Harry W. Dietert Co., Detroit. In operation the stopper is lifted and the attached flask emptied into the analysis or batch being worked on. Replacing the stopper automatically refills the measuring flask and the dispenser is again ready for use. They come in sizes ranging from 5 ml. to 25 ml. or in 1/5 oz. to one ounce.

New Schimmel Price List

A 12-page price list of its line of essential oils, aromatic chemicals and related materials was issued recently by Schimmel & Co., New York. The price list bears the designation X and No. 25.

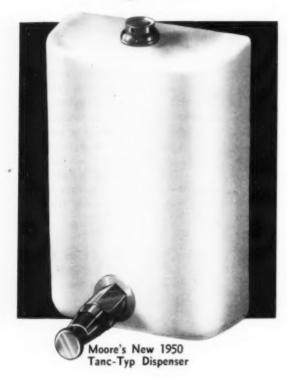
Monsanto Anti-Oxidant

An amino compound, ortho biphenyl biguanide, effective in minute quantities in restraining the oxidation of soaps, and resulting rancidity and discoloration, is described in detail in a recently issued bulletin of Monsanto Chemical Co., St. Louis. The compound, "SA-326," is said not to impart color or odor to soaps, nor to affect their efficiency in any degree. It may be used in either soda or potash soaps. Characteristics, how to use it in various forms of soap are included in the five-page bulletin. A test for soap oxidation and rancidity is also given.

MM&R Price List

A price list and catalog for the second quarter of 1950 was issued recently by Magnus, Mabee & Reynard, Inc., New York.

Piling Up ORDERS! ORDERS!



MOORE SUCCESS That Means MORE PROFITS For You—

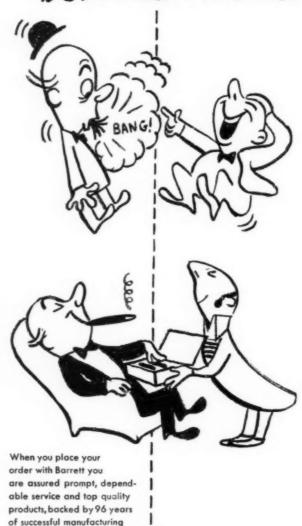
MORE PROFITABLE to Install—A battery of new Tanc-Typ dispensers adds up to a good sale. In installations alone, jobbers are enjoying a good profit.

More Profitable for Soap Sales—The new valve of the Tanc-Typ takes severe punishment. There's seldom an "out of order" sign to hold up the soap! The sturdy tank body is made of heavy, 20-gauge steel, double-coat with vitreous enamel.

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U.S.P. Cresol Tar Acid Oil
Cresylic Acid Naphthalene
U.S.P. Phenol Parachlorometacresol
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Chloroxylenol Pyridines Xylol



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PRODUCTS AND PROCESSES

Detergent for Linen

A preparation for laundering linen may be prepared from 16 parts of sodium stearate, 24 parts of anhydrous sodium perborate, and 60 parts of anhydrous sodium carbonate. Wet linen is plunged into a 10 per cent hot solution of the mixture, left for 12 hours, and then rinsed. Ital. Pat. 433,-966. Through Chem. Abs.

Tall Oil Soap

Acid-refined tall oil was separated into resin acid and fatty acids of approximately 94 per cent purity, made into soaps, and compared with those made from oleic acid and rosin. Tall oil resin-acid soap and rosin soap are roughly comparable in dispersing power and lowering of surface tension and interfacial tension. The tall-oil fatty acid soap shows some points of inferiority to sodium oleate, because of its greater unsaturation. F. D. Snell and I. Reich. J. Am. Oil Chem. Soc., 27, No. 3, 73-74 (1950).

Continuous Soapmaking

Continuous soapmaking requires that the correct amounts of fat and caustic soda meet at a given point for direct conversion into soap. Soap by the spray method yields a dry powdered product which, it is claimed, can be hydraulically pressed into toilet soap tablets. Application of the centrifugal saponification process is claimed to render soap in the same condition as after the finish in the boiled process. However, the continuous process does not have a stage allowing for the gradual loss of temperature from 212° to 170/150° F. which takes two or more days during the rest period after fitting in the boiled process. Many physical alterations occur during this time which changes, most soapmakers feel, are essential to a first class toilet soap. The continuous process appears to be suitable for all types of soap, except

quality toilet soap. Chem. Age, 62, No. 1592, 43, (1950).

Parasiticide

Polysulfides are allowed to become solid and more adhesive by addition of starch. A typical product contains: 67 per cent alkyd polysulfides, 11 per cent starch, 21 per cent water and one per cent HCOOH. Ital. Pat. 435,261. Through Chem. Abs.

Improved Wax Polishes

Wax emulsion polishing compositions made of carnauba and similar waxes may be improved by adding maleic anhydride modified glycerolrosin esters. One coating composition consists of:

	parts
carnauba wax	6.1
oleic acid	1.8
monoethanolamine	1.05
Resin (consisting of 14.1 per	
cent maleic anhydride)	4.05
glycerol	13.1

It includes a resin consisting of 14.1 parts of maleic anhydride, 72.8 parts of rosin and 13.1 parts of glycerol. A clear coating composition may be made from a wax, oleic acid, amine and a resin containing: 5-14.1 parts of maleic anhydride, 72.8-86 parts of rosin and nine-13.1 parts of glycerol. U. S. 2,483,701.

Bubble Bath Preparations

Bubble bath preparations, both in liquid and solid form consist of a sulfonated or sulfated detergent and a diluent. The most common active ingredients for both the powder and liquid product are sodium lauryl sulfate, sodium lauryl sulfonate or an alkyl aryl sulfonate. The liquid product can also incorporate oleic acid or the oleyl radical instead of the lauryl radical, since these produce stronger bubbles. The powdered product is usually diluted with a polyphosphate or sesquicarbonate, to the extent of 10 to 75 per cent, depending on the price

of the product. Due to the hydrolysis of the polyphosphates, these are not suitable as builders for the liquid products, which usually consist of a detergent in water. The liquid products come in ten to 35 per cent dilutions, depending also on the cost of the product. In addition to the detergent and water, they may also contain a freezing depressant such as alcohol or propylene glycol.

The preparation of both the liquid and solid products is relatively simple, since it consists primarily of mixing the component ingredients. Drug and Cosmetic Industry, 66, No. 1, 26-27 (1950).

Rapid Soap Analysis Method

A method for analyzing dentifrice soaps, liquid soaps, shampoo liquids, etc., is based on the solubility of soaps and sulfonated products in aqueous alcohol and potassium chloride solutions, and the solubility of the other constituents in petroleum ether. Alkali metals, chlorides, glycerol, resin, water and perfumes are determined from separate samples. Olearia 3, 13-20 (1949).

Ammoniated Toothpaste

A working formula for making an ammoniated toothpaste is as follows:

	parts
Tricalcium phosphate	26.67
Glycerine	
Water	15.40
Flavoring	
Gum tragacanth	
Saccharin	
Surface active agent	
(Nacconol LAL)	2.89
Diammonium phosphate,	
powder FF	5.00
Urea. 100 mesh	3.00

Allow the gum to expand in the water at room temperature for 30 minutes, add the glycerine and mix well. Slowly add the tricalcium phosphate to this solution and mix thoroughly. Mix in the remaining ingredients in the following order: saccharin, flavoring, diammonium phosphate, urea and surface-active agent. Mix no longer than necessary to obtain complete distribution. Manuf. Chem. 21, No. 3, 106 (1950).



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SOAP PLANT OBSERVER

By John W. McCutcheon

T HAS been mentioned from time to time that the price situation on synthetics has not varied a great deal over the years. In 1935, for example, the average price on a select number of synthetic detergents was about 113 per cent of the 1947 price. At the present dollar value, this represents a cut in prices of over 50 per cent.

During the war, price ceilings held detergents to a fairly constant level. Unlike almost all other commodities, detergent prices did not rise when ceilings were lifted. This price stability has been pointed out by the industry as an important selling factor in favor of synthetics over soaps. This advantage is more apparent than real. Industrial soap has always been sold on a low margin of profit. When you ride the rods you get all the bumps! It is possible that when the manufacture of synthetics becomes as diversified as that of the soap maker and when through competition the price of detergents has fallen to a point close to its raw material cost, we may also expect a price fluctuation in this commodity. Does this mean that the price of synthetics can continue to drop? From the writer's point of view this would seem to be the case.

THE bleaching of oils and fats is a practical necessity for all soap makers who aspire to such high grade products as toilet soaps. Yet it is surprising how many postpone taking any action on this matter and depend year after year on the small amount of color that may be removed in the soap kettle. Even where colored bar products are concerned, bleaching is essential if dull tones are to be avoided.

Bleaching has its drawbacks, too, because the closer the product

comes to being snow white the more noticeable is discoloration due to aging, and the more particular one must be



all along the line in the selection of raw materials and in their processing.

The bleaching operation is essentially the removal of coloring matter by its adsorption on colloidal clay. This is the favorite procedure for most animal and vegetable fats for chip and toilet bar manufacture. Chemical processing by other means is used on certian materials difficult to bleach such as palm oil, soya bean oil, fatty acid stock, etc. But generally the soap maker feels that the less harsh his treatment of the raw stock, the less likely it is that the color will revert. In fact, it is common practice to test lots of tallow for their bleaching properties and to use only those for white products which bleach easily with 1 low percentage of earth. Usually a lovibond color on a 51/4" tube of 10 yellow and 0.8 to 1.0 red will give a fine white soap.

The equipment for bleaching consists of a tank with good agitation, pumps for transferring the oil or tallow and one or more open type nonwashing filter presses fitted with pan and chute, air and steam lines, pressure gauge and a ratchet closing device.

The oil or tallow should be dry prior to adding the required two or three per cent of activated earth. Otherwise the earth will absorb the moisture and be lost to the bleaching operation. Dyeing may be accomplished in the bleacher by heating the oil above 100° C. and preferably up to 120° C. After the earth is added, agitation is continued for from onehalf to two hours until laboratory tests indicate the maxmium color removal for the conditions in use. The charge is then passed through the press to remove the spent earth. The presses are blown, steamed and opened to discharge the cake. It is quite impossible to remove all the oil from the cake, and this loss is the greatest single expense in the whole operation. It varies from 20 to 30 per cent of the total cake weight, depending principally on the type of earth used.

It is most desirable to exclude air from the operations to avoid oxidation. This is done by designing the bleach vessel as a vacuum unit. Since it is desirable at times to remove rather large quantities of water from the oil, a pump is preferred to a steam ejector. This, however, will depend upon the overall type of operations carried on. One very important point frequently overlooked in design is the matter of having the heating coils submerged in the oil at all times, otherwise it is almost impossible to avoid burning the oil or fat. If the size of the batch is to be varied, two sets of coils are desirable: an upper set and a lower set, each capable of independent oper-

Hydrogenation Rates

Data on the hydrogenation of cottonseed oil shows that the ratio of reaction rates of linoleic acid to oleic acid, varies from about four to one in very non-selective, to about 50 to one in very selective hydrogenation. The following relative reaction rates for oleic, isolinoleic, linoleic, and linolenic acids were respectively: non-selective, one, 2.5, 7.5, 12.5; selective, one, 3.85,

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31, 77. The behavior of soybean oil hydrogenated selectively was quite similar to that of linseed oil. The results indicate that the solution of hydrogen in the oil and the adsorption of unsaturated oil on the catalyst are the two steps which are controlling with respect to the reaction rate. A. E. Bailey, J. Am. Oil Chemists' Soc. 26, 644-8 (1949).

THE increase of crude coconut oil oil prices recently focuses attention on its significance in the detergent field and raises the question as to what substitutes can be used. The possibility that certain types of synthetics incorporated with soap may have some bearing on the amount of coconut oil required in the formula has been mentioned. This matter certainly bears close study by all research workers in the detergent field. However, the present situation in regard to coconut oil appears to be best summarized by saying that normally approximately 15 per cent of the oils and fats going to the soap kettle is coconut oil. Under adverse pricing conditions or physical lack of supplies as in the 1942-45 period the percentage may be cut back as low as 2 per cent to 4 per cent.

Whenever the amount of coconut oil or other substitute lauric acid oils is reduced in the soap the quality of the product suffers. Coconut oil is used extensively now in foreign countries for edible purposes and this factor must be considered in appraising the world situation. It never has been a very important edible oil here. For example, only 17 per cent of the total coconut oil consumed in 1948 (Facts for Industry, U. S. Bureau of Census March 22, 1950) was for edible purposes. Of the 83 per cent balance, 96 per cent went directly to soap making and only 4 per cent to other uses. In 1948, the total inedible uses other than for soap was 15,940 million pounds. The use of coconut oil in synthetic detergents for this period is estimated at over 40 million pounds so that undoubtedly some of the coconut oil labelled as "consumed in soap," has found its way to this end use. It is probably safe to say that the use of coconut oil in synthetics is declining . in favor of petroleum products. That this trend is not a landslide is evidenced by the fact that one of the largest user of coconut oil derived synthetics is presently installing added facilities for the manufacture of lorol alcohol. (Procter and Gamble—Long Beach plant extension).

It may be concluded, therefore, that coconut oil or its substitutes are a very necessary raw material for soap and detergent manufacture no matter what their price. Even at the high price of about 26c in 1948, 14 per cent of the total fat and oil charge to the kettles was coconut oil. During the first half of 1949 when the price averaged under 20c, there was still a consumption rate of 14 per cent. That the consumption did not increase in the face of lower prices is probably due to keener business competition.

Practically all our coconut oil comes from the Philippines. Right after the war, production increased by leaps and bounds, and although it is still above pre-war level it is far below the requirements demanded by present detergent production. It is this situation which has maintained the price level so high in comparison with other oils and fats. The reduced export of copra and CNO from the Philippines is probably due to a greater domestic consumption in the islands and partly

Issuance of its newest wholesale price list a complete 28-page bulletin—was announced recently by Florasynth Laboratories, Inc., Bronx, New York.



due to storm damage of last November.

Imports of babassu oil, a substitute for coconut oil, produced almost entirely in Brazil, were drastically cut in 1949. At best imports are small. The other main substitute for coconut oil is palm kernel oil. This, too, is available to America in only limited quantities. It is this situation which has caused the slight rise in prices over the past few months. There is no reason to believe the situation will be bettered or that even substitutions for coconut oil on a large scale would cause any appreciable difference. Let us hope that some botanist may discover a means of developing a lauric acid oil bearing plant within the confines of the U.S.A.

N. E. Chemical Club Elects

The following officers were elected by the Chemical Club of New England at its annual meeting held at the Parker House, Boston, April 10: president, Thornton C. Jesdale, Monsanto Chemical Co., vice-president, David J. O'Connell, Howe & French, Inc., treasurer, Edward C. Richardson, U. S. Industrial Chemicals, Inc., secretary, Richard D. Wilson, Doe & Ingalls, Inc. Howard J. Heffernan of Monsanto was elected to the executive board for three years.

Givaudan English Plant

A new factory for the manufacture of aromatic chemicals in England was announced recently by Givaudan-Delawanna, Inc., New York. Located in Warlingham, Surrey, on the outskirts of London, the new factory consists of a number of buildings formerly used as research laboratories. A Givaudan branch had been functioning in London since a short time after the formation of the company in Geneva in 1895. According to Andre Givaudan, who was recently in the United States, the new factory will be devoted primarily to the manufacture of aromatic chemicals that are not yet made there, or that are not available from domestic production in qualities and grades demanded in the British



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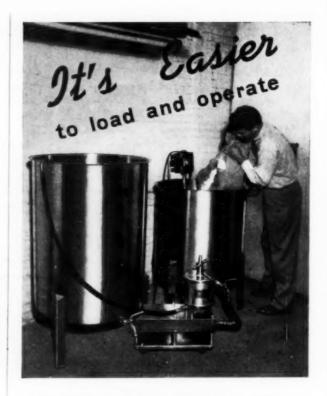
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PATENTS NEW

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The data listed below is only a brief review of recently issued pertinent patents obtained by various U.S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. They will be pleased to give you free preliminary patent advice.

No. 2,496,328, Process of Producing Polyhydric Alcohol Esters of Fatty Acids, patented by Adam Carr Bell, Jackson Heights, and William Godfrey Alsop, New York, N. Y., assignors to Colgate - Palmolive - Peet Company, Jersey City, N. J., a corporation of Delaware. The patent

covers the process of producing polyhydric alcohol esters of fatty acids having a high monoester content which comprises heating to a temperature of at least 200° C. at least one fatty material from the group consisting of fatty acids and fatty acid esters with 4 to 10 molar proportions of polyhydric alcohol which is not miscible in these amounts with the reaction product, agitating said materials while so heated to form an intimate dispersion of said alcohol and fatty materials, subjecting the product after the reaction has reached substantial equilibrium to cooling against a surface having a temperature somewhat above the melting point of the product to reduce the temperature of the product below about 100° C. while still substantially maintaining such dispersion, and permitting the cooled product while still liquid to separate into an ester layer containing a minor amount of dissolved polyhydric alcohol and a substantially pure layer of polyhydric

No. 2,497,294, Insecticidal Composition, patented by Leonard C. Cartwright, New York, N. Y., assignor to Foster D. Snell, Inc., a corporation of New York. A liquid composition suitable for use in forming a hard nontacky insecticidal film is described comprising 2,2, - bis(p - chlorophenyl) 1,1,1-trichlorethane serving as the insecticide, a water insoluble cellulose ether of an aliphatic alcohol containing 2 to 4 carbon atoms to the molecule serving as hardening agent, a resin selected from the group consisting of coumarine-indene resin, terpene resin, ester gum, polymerized ester gum and maleicized ester gum, and a volatile solvent medium for the insecticide, hardening agent and resin, proportions by weight of the non-volatile ingredients being 0.5 part to 2.5 parts of the resin, 0.1 to 0.5 part of the cellulose ether and 5 parts of the insecticide.

No. 2,496,576, Glycerin Condensation, patented by Purdy Bradford, Palos Heights, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois. In a continuous soap making process the patent covers the steps comprising: liquefying a saponifiable fat by adding to said fat a hydrocarbon diluent having a vapor pressure approximately that of undecane; adding a water solution of a calculated amount of alkali to said fat and hydrocarbon sufficient to saponify said fat; saponifying said fat by pass-

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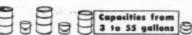
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ing said fat, said hydrocrabon and aqueous alkali through a restricted passage at an elevated temperature; ejecting said hydrocarbon, said water and the products of the saponification including soap and glycerine from the restricted passage at high velocity into a region of diminished pressure whereby said glycerine, said water and said hydrocarbon are vaporized, said glycerine, water and hydrocarbon vapor mixture having a vapor pressure approximately twice the vapor pressure of the hydrocarbon at the glycerine condensing temperature; separating said vapors from said soap; condensing glycerine from the vapor system without condensing said hydrocarbon and water; and subsequently separately condensing the hydrocarbon and

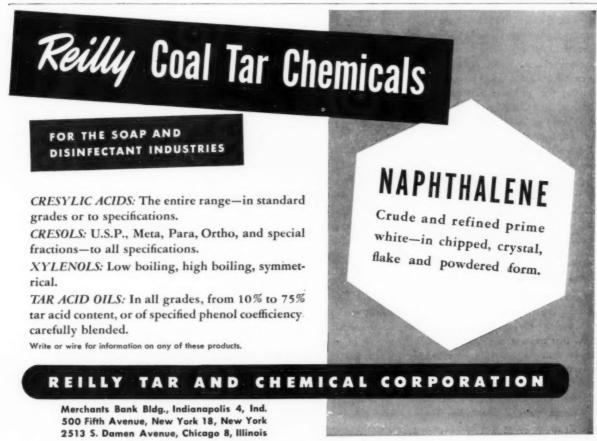
No. 2,490,100, Plastic Fungicidal Composition and Method of Making the Same, patented by Howard E. Smith, Brooklyn, N. Y., assignor to Insl-X Corporation, Brooklyn, N. Y., a corporation of New Jersey. A plastic composition is described comprising an organic plastic material containing unformly distributed therein a triaryl phosphate plasticizer containing phenyl mercury salicylate dissolved therein. A plasticizer composition for imparting plasticity and affording protection against fungi to a plastic material, comprising tri-cresyl phosphate having dissolved therein a phenyl mercury salicylate.

No. 2,486,630, Fat Hydrolysis Process and Apparatus, patented by Alexander C. Brown, Cincinnati, Ohio, assignor to Emery Industries, Inc., Cincinnati, Ohio, a corporation of Ohio. In the continuous high pressure counter-current splitting of fat in a splitting tower, the method of heating fat to a splitting temperature is described which comprises introducing relatively cool fat near the bottom of the tower, percolating relatively hot water downwardly through the tower, and withdrawing relatively cool glycerine water at the bottom of the tower, the specific gravity of the descending water being less than the specific gravity of the fat entering the tower, whereby the fat and glycerine water commingle and separate by virtue of and at a rate determined by the differences of the respective specific gravities at each elevation, as progressively modified by the heat exchange. A splitting tower for the high pressure high temperature countercurrent flow hydrolysis of fatty materials, comprising a lower portion substantially free of flow-opposing structure, a series of baffles in the upper portion of the tower; a plate below said baffles, said plate having a plurality of perforations whereby water admitted to the upper portion of the tower is collected and distributed for unopposed gravity settling due to density differentials through liquid in said lower portion; a heater supplying direct

steam to the contents of the tower, said heater spaced below said series of baffles; and a second heater supplying direct steam to the contents of the tower, said heater spaced above the bottom of the tower but below said first heater, that portion of the tower between said heaters constituting a substantial proportion of the entire tower.

No. 2,485,916, Solvent Extraction of Cottonseed Oil, patented Oct. 25, 1949 by Alicia Perez, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware. An improved method of processing a vegetable material is covered which comprises the steps of contacting said vegetable material with a solvent comprising a monohydric alcohol having up to three carbon atoms per molecule, and between 0.3 per cent by weight and a weight of an alkali metal soap which causes said alcohol solution to lose its fluidity; heating said contact mixture at a temperature between about 40° C. and the boiling point of said solvent for a period of at least 10 minutes; separating said solvent and dissolved material from said vegetable material; and removing vegetable oil from said vegetable material.

No. 2,484,296, N-substituted Oxyacetamides, patented Oct. 11, 1949 by Lowell B. Kilgore, Washington, D. C., assignor, by mesne assignments,



to Lowell B. Kilgore and Helen Ford Kilgore, both of Washington, D. C. An insect combative composition of matter is covered comprising as essential active ingredient an N-substituted α-etherified acetamide having the general formula:

R-O-CH2CO-NHR'

where R is a cyclic organic radical selected from the group consisting of halogenated aryl, homo-cyclic-substituted aryl, aryl of the naphthalene series and unsubstituted cycloalkyl; and R' is a radical selected from the group consisting of alkyl containing at least 4 carbon atoms, alkenyl, and cycloalkyl and a carrier therefor.

The methods in use of evaluating detergent action on textiles bearing standard soil, by using reflectance data, give only relative soil removal values. The reflectance data cannot be calculated to actual soil removal. This was proved by use of an iron oxide pigment in the soiling material. The amount present after washing tests was determined by chemical analysis and showed that reflectance data give only relative results, as they fail to portray true pigment soil content. Use of a method of detergency evaluation based on chemical analysis for the pigment soil, appears to be worth consideration. All types of laboratory detergency evaluation procedures should be considered as screening tests to point the way for full-scale tests, on which the final selection of a detergent system should be based. W. P. Utermohlen, Jr., and M. E. Ryan, Ind. Eng. Chem. 41 2881-7 (1949).

Scouring Cleansers

(From Page 43)

this problem be worked out with the help of an experienced perfume compounder.

Paste Scouring Cleaners

PASTE type scouring products for the household hold a minor position among abrasive cleaners. It appears that the wartime interest in such products has not carried over into the post-war period. Such products are generally intended for rough and tough kitchen ware cleaning. A small portion of the paste is taken up on a wet cloth and used as a scouring agent on

pots and such after the manner of silver and other paste metal polishes.

A study (7) of several such pastes, reported a few years ago, indicated that the average composition of such a product would be about as fol-

	per	cen
Soap chips, yellow		18
Pumice		40
Sodium silicate (40°)		3
Glycerine		2
Water, to make		100

A coarse but uniform grade of pumice is preferable in products of this kind.

On occasion, the patent literature offers information on the production of paste scouring soaps. Thus, according to one British patent (26) such products may be made along the following lines:

	parts
Liquid soap	7- 9
Potash soft soap	
Pumice	
Lemongrass oil	

Abrasive scouring pads have a rather high rank among household cleaning aids. This is apparent from the Milwaukee survey (1), which indicated that 68.3 per cent of the families in this city used steel wool cleaners. These consist of plain steel wool, steel wool pads and soap-filled pads. In addition to these products, the housewife can also buy scouring cleaners made of copper, cloth or plastic.

Every now and then, a new method or material is suggested for making scouring cleaners of this class. In one process (27), the scouring and cleansing product is made from matted hemp fibers formed into a pad-like unit. This pad is impregnated with a mixture containing soap, a resinous material and scouring powder. In a modification (28) of this method the scouring and cleansing pad is made by impregnating the hemp mass with a mixture of soap, a resinous material, bentonite and coloring matter.

In another patent (29), a method is given for combining plastic filaments with ab; asive materials to yield a spongiform mass that can be formed into scouring and cleansing pads. A number of advantages are claimed for this spongiform plastic abrasive pad. It is nonabsorbent, does not disintegrate readily, is long lasting and it can be made in various colors. Since the pad is resilient, it can do a better cleaning job in corners, crevices and angles. Moreover, unlike metal pads, there is no rusting or splintering.

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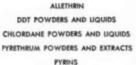
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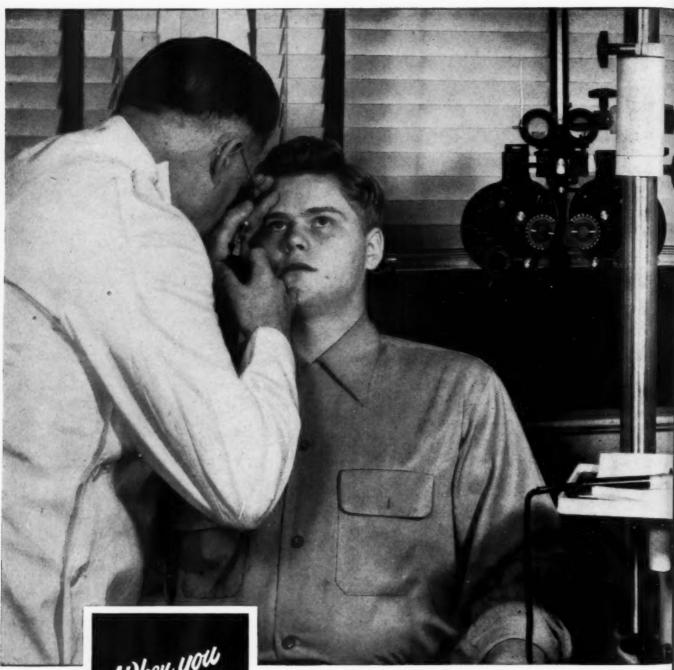


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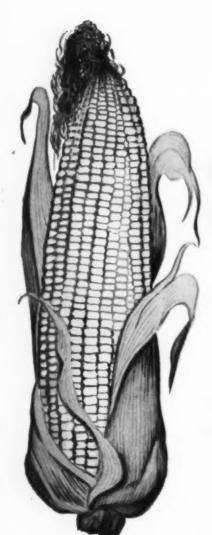


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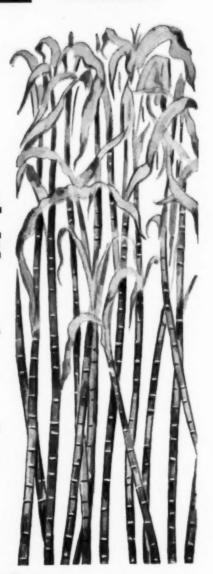
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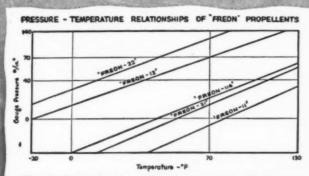
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May, 1950



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Ethanol	disinfectants; cosmetics; toiletries; cleansers; polishes.				
Mixed Isopropanolamine	dry-cleaning soaps; solvent activator for paint-stripping compounds; emulsifier for water emulsion paints.				
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Compressor piping frames this picture of a Jefferson ethylene unit (purification section) at Port Neches, Texas.

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Briefs

From recent literature

Pour depressants for waxy lubricating oils are prepared by treating an aliphatic substituted hydroxy aromatic compound of formula R_nArOH with an acylating agent (i.e. sebacic acid chloride) in the presence of a Friedel-Craft catalyst. R is preferably an alkyl group of less than 12 carbon atoms and n is 1 or 2. Two percent of the alkyl phenol derivative depresses pour point of waxy oil from 30° F. to -5° F.

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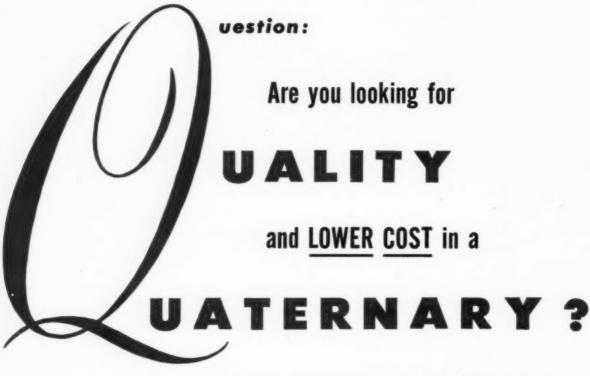
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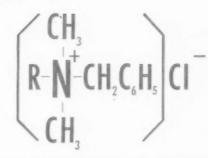
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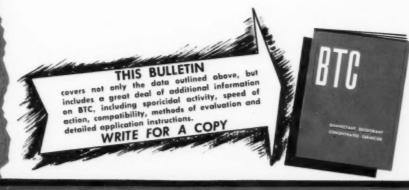
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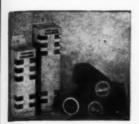
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Simple yet sturdy construction with amazing achievements in design, materials and workmanship! No electrical connections to fus with . . . no moving parts to wear out! Just a few light strokes of the hand pump . . . air pressure does the cleaning work! Tank is made of heavy gauged, stainless steel. Appliers are non-corroive, light weight . . large 6 x 12 in. size . . . cleans exceptionally large area per stroke! Built to tate hard, continuous work day after day!

Rex-Glo-X—superior heavy duty floor treatment ... provides extremely brilliant gloss that wears longer. Waterproof ... scuffproof ... non-slippery. For use on all types of floors, woodwork. "Approved by Rubber Manufacturers Association for use on rubber floors, and Underwriters' Laboratories.

Rex-Glo-Concentrate—Same outstanding features as Rex-Glo-X plus 38% greater solid content . . one coat does the work of two. Provides extra hard, streakless, lacquer-like finish. Recommended by leading insurance company for safety. Approved by Rubber Manufacturers Association and Underwriters' Laboratories.

REX Gym Seal—Amazing new sealer produced by new, scientific, proved superior process! Made of genuine tung oil and Bakelite*. Penetrates, gives tough, leather-like, scratch-proof, anti-slip finish which is pliable yet firm! Easily applied with lambswool mop! Protects markings on basket ball courts!

*Product of Bakelite Corp.

Write for complete information and prices!

REX - CLEANWALL CORPORATION .

108 S. MURPHY AVE.

BRAZIL, INDIÁNÂ

here's proof... sells "We invited Felton chemists to recommend suitable new perfumes for our new line of Casco Aerosol room deodorants and insecticides. I attribute a good part of increased sales this year to the improvements which their recommendations and perfumes made in our Aerosol line." Sales Manager, Appliance Division Casco Products Corp. Bridgeport 2, Conn.

TORNADO*

HI-POWER INSECTICIDE SPRAYERS

Spray effectively at distances up to 50 feet

Cover large areas quickly

Carry insecticides into high and hard-to-reach places

Here is a line of powerful sprayers for all oil-base or water-base insecticides which drive the solutions with such force that there is complete penetration into every crack and crevice. Ideal for reaching highly stacked stored materials — for spraying warehouses, grain elevators and similar locations.

Delivers a high volume of air at high pressure.

Three nozzles for fine, medium and coarse spray.

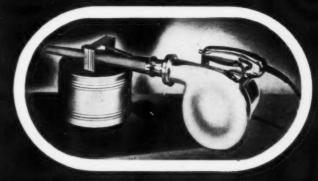
Completely portable. Easy to use and to handle, yet more powerful than any other portable sprayers. Constructed of precision machined aluminum. Handy toggle switch gives instant spray and on-and-off control. Plug into any convenient electric outlet. Equipped with 20 feet rubber covered cable. 1 gallon non-corroding solution container.

Available in sizes from 1/3 to 11/3 H.P.

TORNADO* Model 59—DUSTITE approved by Mill Mutual Fire Prevention Bureau for hazardous locations



TORNADO" Model 48



TORNADO Model 59 DUSTITE

Write for information.

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BREUER ELECTRIC MFG. CO.
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Manufacturers of Precision Insecticide Sprayers Since 1928



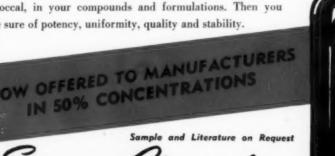
THE ORIGINAL QUATERNARY AMMONIUM GERMICIDE

Research on Roccal, the original quaternary ammonium germicide, will now be conducted in the impressive structure shown above. Here a large staff of scientists working with the most modern equipment, are continually striving to improve existing Sterwin products and develop new products.

IT ALWAYS PAYS TO USE THE BEST

Use only the original quaternary ammonium germicide, genuine Roccal, in your compounds and formulations. Then you can be sure of potency, uniformity, quality and stability.

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ets formerly sold by Special Markets—Industrial Division of Winthrop-Stearns, Inc., and Vanillin Division of General Drug Company

Greetings to members of



27th Annual Convention



BUCKINGHAM **PRODUCTS**

- Water Emulsion Paste Wax
- Nutra-Sheen
 - The Neutral Cleaner
- Anti-Skid No Rubbing Liquid Wax
- Listed By Underwriters Labs.
- Liquid Wax (Solvent Type)
- Liquid Wax (Slip-Resistant)
- Paste Wax
- Rug & Upholstery Shampoos
- Disinfectants & Deodorants
- Asphalt Tile Sealer
- Liquid Soaps
- Metal Polish (White or Brown)
- Wax Base Cleaner
- Gym Finish
- Floor Seal
- Penetrating Floor Seal
- And Other Specialties

The Buckingham line is backed by over a quarter century of intensive scientific research, and practical manufacturing experience in the wax, soap and polish field.

See Our

MR. IRVING WEXLER

May 7-10, Hotel Stevens, Chicago

BUCKINGHAM WAX COMPANY

Mfrs. of Floor Waxes — Soaps — Cleaners — Polishes — Disinfectants — Etc.

LONG ISLAND CITY 1, NEW YORK

Warehouse: DALLAS, TEXAS



Peluxe * NB Cleaner

The all-around, neutral, self-rinsing cleaner... for all general cleaning in the home, office or plant. Non-injurious to the skin, effective and safe to use.

Deluxe *NB Cleaner will be popular with the trade because it is easy to apply, odorless, attractive in color (opalescent), economical and safe.

At last here's a cleaner that gains good results on ALL types of floors, INCLUDING RUBBER AND ASPHALT TILE!

Deluxe *NB Cleaner can be used anywhere and any time because it is effective even in cold or hard water. This feature is a great plus in sales appeal. For more details about Deluxe *NB Cleaner write us immediately.

* None Better

SEND FOR LATEST PRICE LIST CONTAIN-ING A WIDELY DIVERSIFIED LINE OF BAIRD & McGUIRE CERTIFIED PRODUCTS.





Baird & McGuire, Inc. HOLBROOK, MASSACHUSETTS

CREATORS AND COMPOUNDERS OF THE BEST IN CLEANERS AND DISINFECTANTS FOR OVER 41 YEARS

Y PRODUCTS A SECTION OF SOA

SANITALISM STEADILY, substitutes for carnauba in floor waxes and other polishes make progress. Synthetic waxes and new resins, and combinations of these, make inroads into the market for the natural product, while promises of other new and improved substitutes are heard. That the high price of carnauba over the years may have invited intensive research with substitutes is now beside the point. Some feel that the carnauba goose which laid the golden eggs, although still far from dead, soon may find its

demise imminent,—at least for floor waxes.

ATHERING of sanitary supply and janitor supply people from all parts of the country at the annual meeting and trade show of the National Sanitary Supply Association in Chicago focuses more than the usual attention on sales methods today. By dint of hard and improved selling, the sanitary supply industry has broadened the use of sanitation specialties over wide areas in the past two decades. Hand-inhand with increased consumption of sanitation chemicals and accessories has come a steadily heightened level of sanitary standards. Every sanitary supply salesman in effect has been an emissary of better sanitation practices.

During the war and immediately following, great industrial activity made sanitary supply selling relatively easy. But, today, the honeymoon is over. The old ding-dong competition of prewar days is with us again,—and with it has come more than the usual number of complaints from salesmen about their troubles. Softened by the lush days of the war, we suppose that salesmen's gripes are a natural aftermath of the fat years.

Nevertheless, it nettles us a bit to hear these plaints because if sales resistance did not exist, there would be no need for salesmen. If the goods could sell themselves, and all selling were trouble free, the boss could fire his sales staff and merely

hire another order clerk. To the fact that sales difficulties do exist, most salesmen can lay their jobs,—which is something for every salesman in the sanitary supply field to think about. No sales troubles, no jobs!

PRING demand for insecticide raw materials has been more active this season than for several years past. Some suppliers find themselves unable to accept orders for delivery sooner than sixty days. For those who have delayed in taking on insecticide materials or have been ordering on a hand-to-mouth basis, there could be trouble a month or two hence. Unless the entomologists are dead wrong, most sections of the country are likely to see a fairly heavy insect season this summer. If supplies of finished insecticides in the hands of makers and distributors move quickly to consumers, an embarrassing gap in stocks might follow.

The problem of fly resistance to DDT does not appear as yet to have reduced the demand for this material as well as other chlorinated insecticides, notably chlordane and lindane. Heavy demand for agricultural insecticides adds its weight to the current market tightness. Natural pyrethrum is in short supply and allethrin, the synthetic material, has not gained production volume sufficient to close the gap. Current output is reported sold out. Derris is in good supply, but the price has stiffened considerably.

Summed up, both basic materials and finished household insecticides could be in reduced supply come July 1. Agriculture is likely to continue to bid for materials at the expense of household insecticides. Some manufacturers believe that the situation may ease by July, particularly if bug infestations do not come up quickly to expectations. However, protection against shortages appears to be the best position of safety.



Officers and Board of Directors of National Sanitary Supply Association. Seated left to right: President, Carl B. Lien, Lien Chemical Co., Chicago, Ill.; Director, Wm. O. Conley, Conley Chemical & Supply So., Spokane, Wash.; Director, Dewey Doyle, Jr., Doyle Vacuum Cleaner Co., Grand Rapids, Mich.; Treasurer, Donald F. Peatee, The Mellocraft Co., Toledo, Ohio; Director, Elmer H. Bard, Geerpres Wringer, Inc., Muskegon, Mich.; Director, Leo G. Peck, Peck's Products Co., St. Louis, Mo.; Secy. Board of Directors, Lacy E. Crain, Conco Chemical Co., Dallax, Texas; Eastern Regional Vice-Pres., Jacob

Kahn, Windsor Wax Co., Hoboken, N. J.; Vice-President, Al Candy, Jr., Candy & Co., Inc., Chicago, Ill.; Executive Vice-Pres., Leo J. Kelly, National Sanitary Supply Assn., Chicago, Ill.; Standing: Central Regional Vice-Pres., Chas. S. Buschart, U-San-O Corp., St. Louis, Mo.; Director, Ed Hale, Sanitary Supply Co., Albuquerque, New Mexico. Those not present when picture was taken: Western Regional Vice-Pres., S. S. Hockwald, Hockwald Chemical Co., San Francisco, Calif.; Southern Regional Vice-Pres., John F. Walsh, Tesco Chemicals, Inc., Atlanta, Ga.; Southwestern Regional Vice-Pres., I. V. Dreyfus, Dreyfus Janitor Supply, Ponca City, Okla.

HE emphasis will be on sales at the discussion sessions of the 27th annual convention and merchandise exhibition of the National Sanitary Supply Association, being held at the Stevens Hotel, Chicago, Sunday through Wednesday, May 7-10. Association matters, including the presentation of reports of the officers and the election of new officers and directors, are to be covered at the four-day meeting.

Because of the current widespread interest of its members in selling, this subject dominates the meeting program. William Rados, sales training consultant of Millburn, N. J., will present what amounts to a concentrated one day course in sales—sales training and supervision—to be presented at the afternoon discussion ses-

sion, Tuesday, May 9. He is also expected to cover the question of recruiting and selecting sales personnel, as well as their training, advancement, scale of compensation etc. The author of "How to Select Better Salesman," published in 1946 by Prentice-Hall Co., New York, Mr. Rados has conducted sales training programs for a number of leading American companies and their various types of sales personnel. He is also a past president of the National Society of Sales Training Executives. Mr. Rados' presentation is to be divided into three parts, the first, "How to Recruit and Select Productive Salesmen" and the second. "How to Train and Supervise Salesmen for More Effective Selling." The final portion of the program is to be a series of sales films in both slide and

recording forms. Question and answer periods follow both the first two parts of the discussion.

The merchandise exhibits at this year's meeting are expected to be more numerous than ever before. Exhibit space was sold out months ago to over 160 manufacturers, according to Leo J. Kelly, executive vice-president of the National Sanitary Supply Association. This year's meeting place provides ample facilities for all exhibits to be located on one floor and in one exhibit area. New materials, methods and ideas are being shown at the 1950 merchandise display, which opens Sunday morning at 9:00 a.m. and remains open until 7:00 p.m. A number of new exhibitors have taken space for the 1950 meeting, as well as many older firms who have been

regular participants for many years past.

The exhibit floor schedule on Monday is from 9:00 a.m. to 12:30 p.m., at which time exhibits are closed until 4:30 p.m., for a business meeting of the association. At that meeting, which follows a group luncheon in the Boulevard Room, the convention is officially convened by N.S.S.A. president Carl B. Lien of Lien Chemical Co., Chicago. Following the invocation, Mr. Lien is scheduled to read his president's address. Other reports or addresses of officers include those of executive vice-president, Leo J. Kelly; vice-president, Al Candy, Jr., of

Candy & Co., Chicago; treasurer, Donald F. Peatee of Mellocraft Co., Toledo, O.; and secretary of the board of directors, Lacy E. Crain of Conco Chemical Co., Dallas, Tex.

Regional vice-presidents and directors are to be introduced as the next order of business, following which Mr. Lien appoints a nominating committee.

Also slated for the Monday afternoon business session is the showing of the film, "The Cleaning and Maintenance of Soft Floors," after which there is to be general discussion on how to use the film most effectively. There will also be a report on the re-

sults achieved in the showing of the film and suggestions for improving future productions.

Amendments to the by-laws; the proposed code of ethics, acceptance of future new members and changing the association to an Illinois corporation are scheduled for discussion at the Monday afternoon session, too. Unfinished business is the final topic listed prior to adjournment on Monday afternoon, May 8.

The exhibit hall opens immediately after adjournment on Monday afternoon and remains open until 10:00 p.m.

The same schedule holds for

Program for 27th Annual National Sanitary Supply Assn. Meeting Hotel Stevens, Chicago, May 7-10

SUNDAY, MAY 7, 1950

Registration: 8 A.M. to 5 P.M. Exhibition Hall open 9 A.M. to 7 P.M.

MONDAY, MAY 8, 1950

Registration: 8 A.M. to 8 P.M. Exhibition Hall opens 9 A.M. to 12:30 P.M. and from 4:30 P.M. to 10 P.M.

(Exhibition Hall closed during business meetings—12:30 P.M. to 4:30 P.M. Exhibition Hall reopens immediately after meeting adjourns)

12:30 P.M. Luncheon-Boulevard Room, Stevens Hotel

1:45 P.M. Convention Meeting convened by National President, Carl B. Lien—Boulevard Room, Stevens Hotel

1:50 P.M. Invocation

1:55 P.M. Address of Welcome, President, Carl B. Lien

2:15 P.M. Report of Executive Vice-President, Leo J. Kelly

2:35 P.M. Address of Vice-President, Al Candy, Jr.

2:55 P.M. Report of Treasurer, Donald F. Peatee

3:15 P.M. Report of Secretary of Board of Directors, Lacy

3:20 P.M. Introduction of Regional Vice-Presidents and Directors

3:25 P.M. Appointment of Nomination Committee by President, Carl B. Lien

3:30 P.M. Showing of Film, "The Cleaning and Maintenance of Soft Floors" and general discussion on "How to use it effectively" "Report on results achieved"—Suggestions on

how to improve future productions
4:10 P.M. Amendments to By-Laws. Code of Ethics—
Acceptance of future new members—Change to Illinois Corporation

4:30 P.M. Announcements—Unfinished Business— Adjournment to Tuesday Luncheon, May 9, 1950, 12:45 P.M.—Boulevard Room, Stevens Hotel

Exhibit Hall opens immediately upon adjournment

TUESDAY, MAY 9, 1950

Exhibition Hall open 9 A.M. to 12:30 P.M. (Exhibition Hall closed during business meeting—12:30 P.M. and balance of this day. Banquet at 7 P.M.)

12: 30 P.M. Luncheon-Boulevard Room, Stevens Hotel

1:45 P.M. Meeting—Boulevard Room, Stevens Hotel President, Carl B. Lien, Presiding Report of Nominating Committee Election of Officers Introduction of New Officers

2:00 P.M. "How to Recruit and Select Productive Salesman." Presented by William Rados, Sales Training Consultant, Past President National Sales Training Executives.

Question and Answer session will follow

2:45 P.M. "How to Train and Supervise Salesmen for More Effective Selling." Presented by William Rados, Sales Training Consultant, Past President National Sales Training Executives.

Question and Answer session will follow

3:45 P.M. Sales Films—
Films on Sales—Slides and recordings
(Available for members' use)
"How to close without tricks or traps"

"How to make your selling points penetrate"

"How to make your selling points penetrate"
"How to overcome objections, unobjectionably"
"How to exterly compatition"

"How to outsell competition"
"How to be a good public speaker sitting down"
"How to make your customer like you and trust

you and stick to you" 4:45 P.M. Adjourn to prepare for Banquet at 7 P.M.

4:45 P.M. Adjourn to prepare for Banquet at 7 P.M.

7:00 P.M. Annual Banquet and Super Floor Show with Dancing to follow until 12 P.M.

WEDNESDAY, MAY 10, 1950

Exhibition Hall open 9 A.M. to 2 P.M.

There will not be a general meeting Wednesday.

Members are urged to complete their business with all exhibitors as final closing of all exhibits will take place at 2 P.M.

List of N.S.S.A. Exhibitors

Firm Name	Booth Number	Kleenette Manufacturing Co., Chicago	27
Acme Sponge & Chamois Co., Chicago	87	Knox Chemical Co., Chicago	47
Acorn Paper Co., San Francisco			
Advance Floor Machine Co., Minneapolis		Laitner Brush Co., Detroit	
Air Purification Service, Inc., Newark, N. J		F. H. Lawson Co., Cincinnati	
Allied Block Chemicals Co., Pittsburgh		Lily-Tulip Cup Corp., New York	
American Dispenser Co., New York		Lincoln-Schuster Floor Machy. Co., Chicago	
American Standard Mfg. Co., Chicago			
American Textile Products Co., Cleveland		Market Forge Co., Everett, Mass	
Arcade Industries, Inc., Chicago		Frank Miller & Sons, Inc., Chicago	
S. M. Arnold, Inc., St. Louis		Mione Mfg. Co., Collingdale, Pa	19
Atlantic Stamping Co., Rochester 2, N. Y		Modern Sanitation Magazine, New York	
Atlas Products Co., Chicago	127	Moore Brothers Co., New York	
Baird & McGuire, Inc., Holbrook, Mass	141	Multi-Clean Products, Inc., St. Paul 1, Minn	
Beckley-Cardy Co., Chicago		Noticed Back Co. Access III	17
Bobrick Manufacturing Corp., Los Angeles		National Brush Co., Aurora, III	
Boyle-Midway, Inc., New York		National Super Service Co., Toledo	48
Breuer Electric Mfg. Co., Chicago			
Burcott Mills, Chicago	55	O'Brien Mfg. Co., Chicago	39
Candy & Co., Chicago	110-111	Oil-Dri Corporation of America, Chicago	24
*Chase Products Co., Maywood, III.		OA TIME BIRSH CO., FRENCHSK, MU	
Chemical Service of Baltimore, Baltimore		Palmer Fixture Co., Waukesha, Wis	17
Clarke Sanding Machine Co., Muskegon, Mich	89-90	Paper Container Mfg. Co., Chicago	67
Colgate-Palmolive-Peet Co., Jersey City		Peck's Products Co., St. Louis93-	
Columbia Chemical Co., Chicago F. C. Cook Co., Denver		Perfo Mat & Rubber Co., New York	
r. C. Cook Co., Denver	12	W. M. Pettett Co., Tulsa, Okla	
Dash Metal Products Co., Brooklyn	52	Piedmont Mop Co., Charlotte, N. C	
Davies-Young Soap Co., Dayton, O		, , , , , , , , , , , , , , , , , , , ,	-
Deshler Broom Factory, Inc., Deshler, Nebr		Pine-O-Pine Co. of Texas, Inc., Houston	
Doyle Vacuum Cleaner Co., Grand Rapids, Mich		Plaracot Corp., Chicago	
E. F. Drew & Co., New York		Pollock Corp., Dayton 4, O	
E. I. du Pont de Nemours & Co., Wilmington 98, Del		Professional Window Cleaners' Supply Co., Detroit	
E. I. de l'ont de l'emouls o Co., Winnington 70, Del		Protecto Products Co., Pomona, Calif	
Economy Mop Wringer Co., Chicago	130		
Empire Brush Works, Inc., Port Chester, N. Y		Ransom Brush Co., Chicago	
Essential Chemicals Co., Milwaukee		Rex-Cleanwall Corp., Brazil, Ind	
Ex-Cell Products, Chicago	7	Rochester Can Co., Rochester 9, N. Y	
Fairfield Laboratories, Inc., Plainfield, N. J.	79		
Federal Varnish Co., Chicago		Sanatex Corp., Chicago	51
Finnell System, Inc., Elkhart, Ind		I. Schneid, Inc., Atlanta	42
Flour City Brush Co., Minneapolis		Schroeder & Tremayne, Inc., St. Louis	14
Franklin Metal Products Co., Chicago		Silver Brush Works, Inc., Chicago	
Franklin Research Co., Philadelphia Fuld Bros., Inc., Baltimore		Smyth Mfg. Co., Newark, O	44
raid bross, their partitioners.		Soap and Sanitary Chemicals Magazine, New York	64
Geerpres Wringer, Inc., Muskegon, Mich	75-76	Solvay Sales Division, Allied Chem. & Dye Corp., New York	
General Floorcraft, Inc., New York City			48
Golden Star Polish Mfg. Co., Kansas City 1, Mo		Standard Chemical Co., St. Louis	33
Greenview Manufacturing Co., Chicago	107-108	Sterwin Chemicals, Inc., New York	
H & M Sales Co., Chicago	49	Sugar Beet Products Co., Saginaw W. S., Mich	11
Haag Laboratories, Inc., Blue Island, III.		Super Products Co., Chicago	50
Harley Soap Co., Philadelphia		Superior Rubber Mfg. Co., Chicago	95
Warren Haviland Corp., St. Louis		Sure-Flo, Inc., Detroit	26
Herz Manufacturing Corp., New York		Tech Soap Mfg. Co., Chicago	74
Hild Floor Machine Co., Chicago Hilger Co., St. Cloud, Minn		Texas Feathers, Inc., Brownwood, Tex	30
R. M. Hollingshead Corp., Camden, N. J.		Tu-Way Products Co., Detroit	129
Holt Manufacturing Co., Oakland 12, Calif		Tru-Pine Co., Chicago	
Hospital Specialty Co., Cleveland 3, Ohio		United Floor Machine Co., Chicago	46
Howard Dustless Duster Co., Dorchester, Mass		United Sponge Co., Chicago	
H. D. Hudson Mfg. Co., Chicago		U. S. Cocoa Mat Corp., Madison, O	31
Hysan Products Co., Chicago	109	James Varley & Sons, Inc., St. Louis	59
Illinois Duster Co., Chicago	78		
Imperial Brass Mfg. Co., Chicago		T. F. Washburn Co., Chicago	88
International Metal Polish Co., Indianapolis	70	Wear Proof Mat Co., Chicago	106
Ironal Corp., Dayton, O		White Mon Wringer Co., Fultonville, N. Y	158
S. C. Johnson & Son, Inc., Racine, Wis	42-43	Windsor Wax Co., Hoboken, N. J	12
Kem-Stone Products Co., Chicago	155	****	
Kent Co., Rome, N. Y		Zelinkoff Co., Wichita, Kans	22

Tuesday morning as was in effect the previous day. The group luncheon is at 12:30 p.m., closing hour for exhibits. After luncheon, presided over by Carl B. Lien, the report of the nominating committee is to be given; officers will be elected and introduced.

The sales training discussion by Mr. Rados begins at 2:00 p.m. and runs through until.4:45 p.m. The first portion of Mr. Rados' presentation concludes at 2:45 p.m., immediately following which the discussion of training and supervision of salesmen is to be given. At 3:45 p.m. the following sales films are scheduled to be presented:

"How to close without tricks or traps."

"How to make your selling points penetrate."

"How to overcome objections, unobjectionably."

"How to outsell competition."

"How to be a good public speaker sitting down."

"How to make your customer like you and trust you and stick to you." The session adjourns at 4:45 p.m. to prepare for the banquet at 7:00 p.m. A floor show is to be the feature of the banquet, following which there is to be dancing until midnight.

Exhibits are to be open on the final day of the meeting, Wednesday, May 10, from 9:00 a.m. until 2:00 p.m.

On Sunday and until noon on Monday, non-members in the industry, on invitation of the exhibitors, will be permitted to visit the exposition without restriction. Thereafter, however, only properly identified association members will be admitted to the merchandise show.

The current meeting, referred to as the "Treasure Chest Convention," because of the wealth of new ideas, new merchandise and new equipment available at the convention, is expected to be the best attended N.S.S.A. gathering ever held. The "treasure chest" idea is being carried out in another direction, too. Prizes limited in value to not over \$50 will be offered for the first time at manufacturers' booths during the 1950 convention. When dis-

tributor members of the National Sanitary Supply Association register for the meeting they will be given five



WILLIAM RADOS

numbered keys. One of these keys matches the number on some prize displayed in a booth. In addition, prize money may be won in another way at the meeting. The committee of arrangements for the convention is sponsoring a "Mr. X," who is going to circulate about the crowds every day. The 25th man to shake his hand and identify him correctly will win a \$100 bill. Copies of the rules governing this treasure feature are available upon registration, according to Leo Kelly, executive vice-president.

Plans for the production of two

more films, one on maintenance of hard floors and another on the upkeep of wash rooms will be discussed at the meeting by Mr. Kelly, in presenting his report as executive vice-president. He will also review his association activities in the production of the film on the care of soft floors; two booklets, one of 24 pages on "Planning an Efficient Floor Maintenance Program" and another of 18 pages on "Sweeping Methods." The fourth sales tool developed during the year by the National Sanitary Supply Association, a set of 10 checking forms for a program of sanitation will also be mentioned.

The election of officers and directors, following the group luncheon in the Boulevard Room on Tuesday, May 9, will probably include the naming of a new president, since the term is now limited to one year. Mr. Lien, the retiring president, who is a distributor, will yield probably to a manufacturer member.

Members of the board include seven from each group who serve twoyear staggered terms. Election of new board members to fill vacancies occurring this year will complete the routine association business.

In addition to the banquet on Tuesday night, to which women are cordially invited, a special program of entertainment is being worked out for women attending the meeting.

N.S.S.A. CONVENTION COMMITTEES

PROGRAM COMMITTEE

Walter Krebs. American Standard Mfg. Co., Chicago, Ill. V. B. Myhan, Arthur Beck Co., Chicago, Ill. Lou Waldron, Columbia Chemical Co., Chicago, Ill. Herman Krankel, Krano Products Co., Chicago, Ill. Marshall L. Magee, T. F. Washburn Co., Chicago, Ill.

REGISTRATION COMMITTEE

W. A. Boettcher, W. A. Boettcher & Co., Chicago, Ill. Donald F. Peatee, The Mellocraft Co., Toledo, Ohio Norman Rothfield, Ramrod Chemical Co., Chicago, Ill. Ed Wilson, Ludwig Wilson Co., Chicago, Ill.

EXHIBITION COMMITTEE

Herman Siemund, Greenview Míg. Co., Chicago, Ill. H. J. Brownstein, Hysan Products Co., Chicago, Ill. J. F. Hohenadel, Illinois Duster & Brush Co., Chicago, Ill. Arthur P. Boller, S. C. Lawlor Co., Chicago, Ill.

BANQUET & ENTERTAINMENT

Mal Flanagan, Federal Varnish Co., Chicago, Ill.



Night view of the world's largest commercial building that has a floor area of over 93 acres.

... just to clean THE

HE yearly bill for cleaning materials, equipment and services to keep the Merchandise Mart in Chicago spotless and shining runs into seven figures. Lest such a sum be cause for skepticism, remember that the Mart is the world's largest commercial building, its 4,023,400 square feet (equivalent to 93 acres) are dwarfed only by the Pentagon building in Washington, D. C.

To clean the seven and one-half miles of corridors of the Mer-chandise Mart which, incidentally, opened officially a few days more than 20 years ago this month, is a for-midable task since some are as much as 650 feet long and 10 feet wide. In addition, the Mart housekeeping chore involves the sanitary maintenance of 77 rest rooms, equipped with 3,000 toilets, sinks, urinals, etc. Add to this the job of washing the building's 6,500 windows; the daily collection of from seven to 10 tons of waste paper and litter; the polishing of literally miles

By H. H. Slawson

of bronze and other metal trimming; the sweeping up of dirt or snow on the Plaza outside and the tending of the flower boxes overhanging the Chicago's river's edge, on the north bank of which the Mart is located, complicates an already staggering maintenance operation.

And that is not all. There is also the matter of purchasing supplies of soaps, disinfectants, waxes, polishes, flooring machines, brooms, brushes, mops, toilet tissue, wiping cloths, and the hundreds of other chemical specialties and equipment required in a well-balanced cleaning program.

Stocking, keeping inventory of and ordering when needed these numerous sanitation chemicals and equipment is still another phase of an already mammoth operation. New materials must be investigated, tried in actual cleaning operations, checked further if necessary to eliminate "bugs" and finally ordered.

The hiring, training for specialized duties, where needed, and supervision of maintenance employees is also part of the routine of W. A. Stahl, operating manager of the Merchandise Mart, who is responsible for the sanitation program. To the outsider, as well as to many in the sanitation field, maintaining the Merchandise Mart in its present clean and sparkling condition is quite a chore. Not so, says Mr. Stahl, insisting that as organized, the job presents but few headaches.

Situated on the north bank of the Chicago river, where frontier settlers once hunted wolves, the Merchandise Mart covers two full city blocks between Wells and Orleans streets, with historic Kinzie street along its north side. Soaring aloft 18 stories, with a spacious seven story tower on top, the Mart has a gross area



W. A. Stahl, above, is operating manager of the Mart. Right: five foot wide brooms for up and down corridor cleaning.

MERCHANDISE MART

of 4,023,400 square feet. It has a greater floor area than the Empire State Building in New York, and if constructed along the lines of that building, the Mart would rise to a height of 169 stories, as compared with the Empire State's 102 floors. Spread out on one level, the Mart would more than cover Chicago's entire downtown "loop" business district.

Besides the purchase and application of straight cleaning and polishing materials and implements, the sanitation program at the Mart calls for the use of 30,000 gallons of oil paint and a carload of water based paints each year. The maintenance department must also keep track of about 15,000 keys, as well as engage in numerous minor related activities.

Although most of the Mart's more than one thousand tenants arrange to have their offices cleaned themselves, some rely on the building's maintenance staff to do it. If taken collectively, these spaces alone would comprise a fairly large scale operation. In fact, their equivalent coverage would be about the equal of a fairly large skyscraper.

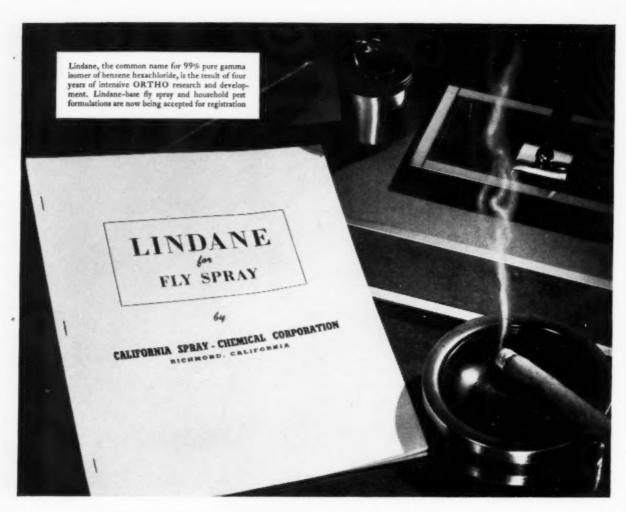
The Merchandise Mart is headquarters for about 20,000 persons, to which may be added a daily average of another 20,000, who visit the building. During the numerous seasonal market events more thousands of buyers pour into the building to shop and order merchandise sold by tenants. As many as 27,000 buyers are reported to have registered for a single home furnishings show.

Obviously, and in spite of Mr. Stahl's modest disclaimer, the sanitation program is a challenging task and one that can satisfactorily be performed only by a well organized body of workers.

Heading the cleaning crew is the maintenance supervisor, Ralph Lowen. He is in charge of 160 men and women making up the cleaning crew. This uniformed army battles dirt in two shifts: the day crew reports at 8:00 a.m. and the night group comes on at 9:15 p.m. Two foremen under Mr. Lowen direct the day and night shifts. Each employee has his appointed routine assignment, but during the show seasons when there is a larger than normal influx of visitors to the building some of the workers are reassigned to form special flying squads which handle special demands for their services quickly.

Keeping corridor floors clean is one of the biggest sanitation problems at the Merchandise Mart, according to Mr. Stahl. About six miles of this area is terrazzo flooring, while on three of the 25 floors, the second, 21st and 22nd, occupied chiefly by offices, retail shops, restaurants and a club, oak parquet is used.

Weather conditions have a very direct bearing on floor maintenance. In dry weather corridor floors are swept with five-foot-wide brooms. A member of the crew pushes the broom up



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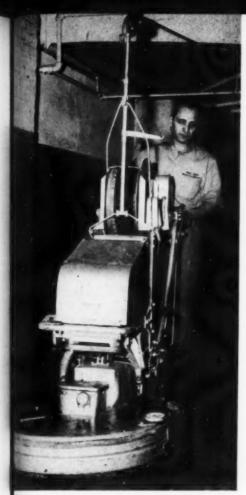
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Treatment	Percent Knockdown	Knockdown Time Fly strain		
		DDT 100 mg. per sq. ft.	50	720 mins. (12 hrs.)
100	2880 mins. (48 hrs.)		1440 mins.	152 mins.
Methoxychlor 100 mg. per sq. ft.	50	255 mins.	56 mins.	37 mins.
	100	380 mins.	108 mins.	67 mins.
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Extra large size floor machine above has 30 inch brush. Three are used in the Mart, one being held in reserve for emergencies.

one side of the corridor and back on the other side. In wet, stormy weather just about everybody pitches in on the mop detail.

Each night, the street level corridor, including the large lobby, is gone over with a scrubbing machine. Other floors receive this treatment on an average of twice a week. Parquet floors are treated differently. They are sealed and the dirt is buffed off. On the ground floor a powdered detergent is used for scrubbing, but elsewhere a liquid green soap is employed. This is used, according to the operating manager of the Mart, because it leaves a bright sheen on the terrazzo.

Mechanical scrubbing machines have been utilized in the Mart since it was opened officially on May 1, 1930, according to Mr. Stahl. He uses several different makes of floor scrubbing machines, but favors the single brush type over the double brush model. With the aid of engineers of Finnell System, Inc., a floor machine having one brush 30 inches in diameter was

eventually developed. It was given its first tryout at the Mart and later was added as a standard item to the Finnell line. Three of these 30-inch brush machines are now used at the Merchandise Mart, with one held in reserve for emergencies. Several smaller machines of different makes are also part of the building's maintenance equipment.

A battery-driven vacuum pickup scrubbing machine, large and stout enough to do a quick, efficient job on main floor corridors in sloppy weather is on Mr. Stahl's list of things he needs. Until such a machine is perfected, Mr. Stahl is forced to resort to hand mopping and a wheel cart wringer, which method is costly in time and money.

The travertin marble walls of the first floor corridor with its 20 feet ceiling are washed down about once a year. At 10 year intervals, they are bleached with an acid paste. This cleaning operation is performed from tubular extension scaffolding, with special care exercised to protect people moving through the corridor be-

All washrooms are policed by cleanup men or matrons at regular intervals. At night, floors and toilet seats are scrubbed thoroughly with soap and water. Porcelain fixtures are scoured with a detergent when necessary and disinfectants applied sparingly. Soap is used widely, and because of correct cleaning procedures and an excellent ventilating system deodorants are said by Mr. Stahl to be unnecessary.

The 6,500 windows of the Merchandise Mart are cleaned by the building's own staff. The operation takes about a month or six weeks.

Considerable time is spent by the clean-up squad in polishing the bronze and other metal work. At times an outside service agency is called in for lacquering and other technical treatment requiring trained and experienced personnel.

Pest control work is also handled under contract by an outside exterminating firm. A high degree of control is consistently maintained, said Mr. Stahl, despite the fact that there are over a dozen restaurants and other types of eating places scattered throughout the building. By preventing insects from getting a foothold the infestation problem is largely overcome, according to Mr. Stahl.

A tremendous ventilating system is said to contribute much to the ease of the sanitation chore in the Merchandise Mart. Filtered air is passed through 30 miles of air ducts at the rate of 5,000,000 cubic feet per minute, giving the building six complete changes of air per hour. Air brought in from the outside first passes through an automatic oil dust filter, then is further clarified by a second filtering through air mat paper, which reduces the dust content of the air entering the building. Eventually, it is expected the entire building will be air conditioned. As a further step in controlling air borne dust and dirt particles, electric eye controls in the smoke stack operate dampers on the boiler drafts whenever soot in the chimney becomes too dense.

As was mentioned earlier, for the operation of the Merchandise Mart, including sanitary maintenance service, Mr. Stahl has an annual budget running into seven figures. Supplies are ordered through the purchasing department at the direction of the manager and department heads. Toilet paper and towels are bought in carload lots, other items are purchased in smaller quantities as needed. Monthly consumption of green soaps runs to about three 150 pound drums. Scouring powder for toilet fixtures is purchased at the rate of about 150 to 200 pounds per year. A 200 pound drum of detergents for floor scrubbing lasts about

Although very little change is made in the sanitary supplies routinely used, occasionally as new materials appear, they are given a practical tryout, Mr. Stahl stated. No formal checking is done on the quality of delivered purchases.

The Merchandise Mart was erected by Marshall Field & Co. at an approximate cost of \$32,000,000. It was acquired in 1945 by Joseph P. Kennedy, former U. S. Ambassador to

(Turn to Page 177)

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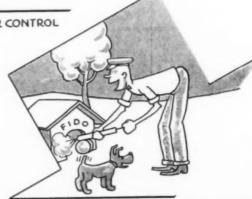


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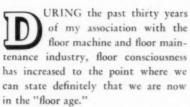
AT LOW COST!

Modern Floor Maintenance Equipment

By Joseph Sassano*

General Floorcraft, Inc.

Improvements in flooring, machines, materials, methods and maintenance products have resulted in a greatly expanded market. Equipment, its application and advantages are described.



What are the reasons for this phenomenal progress? The answer is simple and direct—namely, the combined efforts of three distinct divisions of the flooring industry in America. First, we have the flooring and floor-covering manufacturers, who are responsible for the great improvement in the quality of the various types of floors and coverings which are widely

used all over the world. Secondly, we have the chemical specialty manufacturers, who have kept pace in their research for the best floor maintenance materials for correct use on these improved types of floors. Last, and not least, we have the machine manufacturers, who have developed mechanical methods for economical and efficient floor maintenance.

Since I propose to cover modern, mechanical methods of floor maintenance, I will confine my discussion to that subject, and proceed to show that the ultimate results are very beneficial to all three elements of this now vast combination of the flooring industry.

Without the modern floor ma-

Photo courtesy Continental Car-Na-Var Corp.

chine, we must admit that floor maintenance would be costly in manpower and money. Let us compare briefly the effect of the floor machine on these two factors. Scrubbing a floor by the old hand-method, a man would cover about 150 square feet per hour. Using a floor machine, the same man can easily do from 1200 to 1500 square feet per hour. This is about ten times as fast. The differential in waxing, polishing and buffing is even greater. We have then a factor of 10 to one, or better, in favor of the use of a machine for scrubbing or waxing, buffing and polishing.

It would be difficult to compare further the time element alone in connection with other floor main-

^{*} A paper given at the 36th annual meeting Chemical Specialties Manufacturers Assn., Washington, D. C., Dec. 6, 1949.

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Say you saw it in SOAP!

May, 1950

tenance operations. I take it that we are in agreement that machine floor maintenance, as we know it, today, makes it possible to sell more fine floors and floor coverings and more maintenance materials than any of us ever dreamed possible. Without machine maintenance we could not enjoy the fine, clean, economically kept floors in our modern buildings and homes that we do today.

What is meant by mechanized floor maintenance is the complete upkeep of all types of floors by the correct type of electrically operated machines, and the complete elimination of hand operations. In order to get a good overall idea of the modern floor maintenance equipment now available, I shall describe the more important types.

Single Brush Type

BY FAR the most important of these machines, is the floor machine of the concentrated weight, discbrush type construction. As far as we know, this type is made only in the single brush variety and is available in various sizes of brush diameters. An attempt has been made by our association to standardize on these brush sizes, and working in collaboration with Federal authorities some years ago, specifications were drawn up. These specifications appeared to offer some hope that floor machine manufacturers would accept the standards agreed upon. Such standards exist today with some slight changes, although several new manufacturers are marketing inbetween sizes, presumably hoping that the slight variation will give them certain sales advantages. Such situations are a common occurrence in every industry.

The single brush machine just described, is fast and easy to operate. In my opinion, the single brush machine out-performs twin-brush models. More single brush, concentrated type, industrial floor machines are sold than any other type.

The selection of the model, or size of floor machine, is very important. No experienced salesman would attempt to sell a 12 inch machine where an 18 inch machine should be used. The interest of the customer must be paramount. Too often, the wrong size machine is the cause of endless complaints.

Correct instructions in the use of the machine and its accessories are very important, although, we now find that in many buildings for which floor machines are being sold that maintenance personnel is experienced in their use. So much so, that frequently customers can tell the floor machine manufacturer a thing or two about short cuts, and indicate improvements that are sometimes very acceptable. Gone is the day when long-drawn out, expensive demonstrations were the order of the day in selling floor maintenance machines. The popularity of floor machines, and their wide-spread acceptability reduces the purchasing problem to one of size and make. Naturally, the better known brands of machines are easier to sell.

There are several other types of floor machines made and sold. We have the divided-weight types, which are available in both the single and twin-brush models. In this type of machine, its weight is partially supported by the wheels and the remainder by the brush. The division of weight is related to the machine's construction. In some divided weight machines, manufacturers provide auxiliary weights that may be added or removed at operator's will. Ease of operation and the ability of the machine to be used under low furniture, are the outstanding features of these models.

In addition there are the automatic scrubbers, intended for very large areas and automatically propelled. The operator merely guides the machine. Automatic scrubbers contain soap dispensers, water tanks and vacuum systems. They apply soap and water, and the vacuum picks up the dirty residue from the floor. Such equipment is particularly well suited for large areas that are scrubbed regu-

In recent years, heavy-duty industrial vacuum cleaners suitable for both dry and wet work have become popular and are now widely used. The combined use of a floor machine, and the industrial vacuum cleaner is an accepted, and very economical method

of floor maintenance. Its acceptance is increasing tremendously in many industrial plants, where heretofore, no attention was given to the floors, except for sweeping and an occasional hand-scrubbing. I have witnessed the use of both floor machines and industrial cleaners in machine shops where the removal of heavy accumulations of oils, greases, dirt and other sticky substances, has been accomplished with extreme ease and at low cost. These floors are now kept remarkably clean. This industrial cleaning has opened a vast field for the chemical specialty, as well as the machine, manufacturer.

In addition to the type of maintenance machines already mentioned, there are also drum-type sanding and steel-wool machines, that are available for their specialized uses. Many of us are familiar with drumsanding machines used primarily by the floor contractor. The same type machines are now also used for steel-wooling purposes.

We also have various types of mops, mop buckets, mechanical mop wringers, and heavy brooms that have played, and still play, a great part in our modern methods of floor mainte-

Now that we have some idea of the equipment that is available, for good floor maintenance, we should know something about its use!

Floor Maintenance Methods

PLOOR maintenance methods should be discussed in order that we may all know our common problems. First, we must know the type of floor that is to be maintained. Types of floor include: wood; rubber; asphalt; and hard-surface floors, such as, cement, terrazzo, tile, etc. Common types of floors are linoleum and asphalt tile, both of which are considered resilient floors. If these floors are newly laid, they should be thoroughly scrubbed, using a solution of water and a mild soap. Hard soaps and lye should be avoided as their constant use will injure such floors in a short time. Chemical cleaners may also be used in place of soap solutions. The scrubbing method is simple - the equipment should consist of the right size floor machine, and a wet pick-up vacuum

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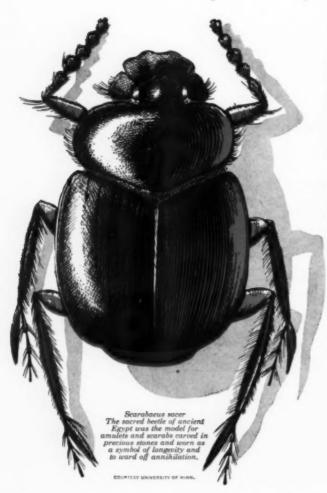
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Photo courtesy General Electric

system, p:eferably. If a vacuum machine is not available, mops and mop wringers may be used in its place. The wet vacuum will do a more efficient job and is more economical. It is important to dry all moisture, particularly, on asphalt tile and wood floors.

Floor machines are made so that various types of brushes and other attachments may readily be used on them. Usually, these accessories are easily attached to the machine without the use of tools. One floor machine can be used for scrubbing, waxing, buffing, polishing, steel-wooling (or, as we term it, drycleaning). It may also be used for disc-sanding, holystoning ship decks and grinding terrazzo and concrete floors, and in addition, may be converted to use in washing and shampooing rugs.

The first step in maintaining a floor is to see that it is clean. Under no circumstances should wax be applied to any flooring, unless all dirt and stains are first removed. This necessarily involves a scrubbing operation. I do not encourage constant scrubbing of wood floors because of the fact that water eventually will destroy their appearance and usefulness. The soap is largely dependent on the type of floor. For instance, on rubber, asphalt tile or linoleum floors, strong caustic soap

solutions should not be used as they can be harmful to such floors.

The soap solution should be applied to the floor by means of a tank, usually mounted on the handle of the floor machine. With such an arrangement, the operator can control the flow of soap solution on the floor. The operator should start at one end of floor and work backwards, so that he does not stand, or walk, in the cleaned area. The machine is operated with a swinging motion, from right to left, then back again. In this manner, a greater area may be covered in a given time. It is necessary to remove the dirty water from the scrubbed area as rapidly as the machine operator moves on with his scrubbing job. For this purpose the wet pick-up vacuum cleaner is employed. The operator of this machine picks up the dirty water as soon as possible after scrubbing. To do this he follows the scrubbing machine operator until both have completed their respective operations.

One man should average about 1500 square feet per hour using a 16 inch machine. A two-man team should be able to scrub and dry an area of 1500 square feet in one hour. This is remarkably fast when compared with hand methods and is far cleaner.

Wax Application

PLOORS should be thoroughly dry before wax is applied. The selection of the type of wax to be used is important. Both solvent, or spirit waxes, and the emulsion type are used widely. I shall not discuss the merits of these waxes, except to state that none of the solvent base waxes should ever be recommended for use on either rubber, or asphalt tile floors. Any of the liquid type waxes may be applied by suitable applicators sold for such purposes. However, the solvent base waxes in either liquid or paste form may be applied by machine.

Regardless of what wax is applied it should be allowed to dry and then be polished by machine. The polishing operation should be followed by buffing if a high lustre is desired. The buffing operation also will remove wave marks left by the brush.

The drycleaning of floors with steel wool has become one of the most

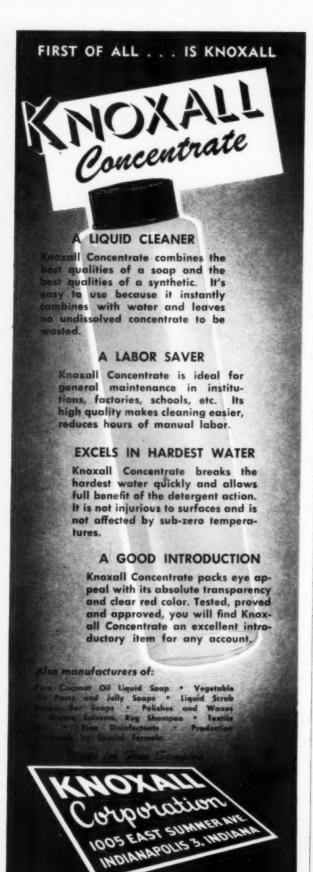
important maintenance operations. It is no longer necessary to scrub off the old, dirty wax from a floor. Pads of fine, steel wool under a floor machine will loosen all dirt from waxed surface and, at the same time, will buff and burnish the surface to a fine finish. A fresh application of wax, when needed, will then restore the floor surface. The constant steel wooling of floors may be recommended as a necessary operation in floor maintenance. No injury to floors results from the use of steel wool.

The foregoing method of machine scrubbing, waxing, buffing and steel-wooling, is used generally throughout the U.S. The cost of the necessary equipment is very small in comparison with the results attained in the way of finer, cleaner looking floors. The full cost of the equipment required is saved many times over in a short period of time. The high grade quality of materials used and the advanced engineering that now enters into the construction of floor machines and allied equipment, keeps service cost at a minimum and at the same time, assures long, trouble-free use.

Most floor maintenance equipment firms are amply staffed with personnel, well qualified to provide any specialized information, or service relating to floor care.

All divisions of the floor industry have available booklets or literature covering all phases of floor care and floor maintenance materials for the correct care of all kinds of floors and coverings. This available information has taken the mystery (if you may call it that) out of the floor care field in industry.

At the present time we are entering the residential floor care field on a broad basis. Manufacturers are coming rapidly into the domestic field with advanced types of light-weight floor machines. Such equipment should help to expand the existing market for chemical specialties and floor covering manufacturers. I predict that the domestic field will prove to be a much larger consumer of waxes, cleaners, soaps, steel wool, floor machines and other types of floor accessories than the industrial field. We have evidence



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Relationship of Insects to Disease

By Dr. F. C. Bishopp, Asst. Chief

Bureau of Entomology & Plant Quarantine
U. S. Department of Agriculture

Part II

ALARIA continues to rank among the world's worst maladies. Although no reasonably reliable statistics are available, there are probably 300 million cases each year resulting in three million deaths. India suffers tremendous loss. Viswanatham (1949) states that the reported death rate from malaria in Bombay Province is about 1.8 per thousand, or 33,000 deaths out of 6,000,000 cases each year, and he adds that "these figures are a gross underestimate."

Marked reductions in the number of malaria cases, and especially of deaths, have resulted from drainage, filling, stream clearing, and improved methods of water impoundment. These methods, though desirable, are very expensive and are, therefore, economically unsound in rural areas and in poor countries.

Larviciding with oil and paris green and adult destruction with space sprays accomplished much, but the discovery of DDT and the development of residual sprays made from it and chemically related materials gave new hope and enthusiasm to malaria fighters. In many countries in all parts of the world antimalarial work is going forward. Dependence is being put mainly on residual insecticides, usually an economically sound practice.

Efforts to relieve suffering, increase food production, and put underdeveloped countries on a sounder economic footing are being fostered by the World Health Organization.

The success attained in controlling malaria mosquitoes in India by Russell, through the use of pyrethrum sprays, and the monumental work of Soper and associates (Soper and Wilson



DR. F. C. BISHOPP

1943) in eradicating Anopheles gambiae Giles in B:azil before the advent of chlorinated hydrocarbon insecticides, lend encouragement to the thought that malaria can be eliminated from vast areas of the globe with the weapons now at hand.

There are so many extensive malaria-control operations under way that only a few examples can be cited here. Reference has been made already to the outstanding work in eliminating Anopheles gambiae from Brazil.

Other South American countries are making distinct progress in reducing malaria through vector control. As a result of a vigorous campaign in Chile f:om 1937 to 1947 under the direction of Doctors Noe, Neghme and others, the only malaria carrier, Anopheles pseudopunctipennis Theo. was eradicated and with it the disease. Venezuela is making rapid progress in that direction. In the town of Puerto Cabello, where antilarval measures and residual spraying have been employed, the death rate per 100,000 has been reduced from 423 in . 1941 to 84 in 1946, and the morbidity rate in corresponding years from 10,267 to 413 (Gabaldon 1948).

To cite a fine piece of malaria mosquito control work, I turn briefly to the Island of Cyprus. An effort is being made there to stamp out the three malaria carriers Anopheles elutus Edw., A. superpictus Grassi, and A. bifurcatus Meig. by the use of insecticides alone. Mr. Aziz (1948) reposted that as a result of carefully organized and thorough work the first two species were practically eradicated and the decline of incidence of malaria even in highly malarious villages was rapid. The estimated per capita cost for the entire campaign was only \$2.50.

Gahan and Payne (1947) have shown that residual spraying of the buildings in one malarious village in Mexico reduced the infection rate, and cut the breeding of the transmitter, A. pseudopunctipennis, by about 94 per cent.

The malaria eradication effort in the U. S., being carried on by the U. S. Public Health Service in cooperation with state agencies, is of great interest to each of us. Malaria has been receding in the United States for several years, because of various factors including some use of insecticides (Andrews 1948). The recession of the disease, however, has been considerably accelerated since 1944 when DDT became available for more general use. The eradication program was initiated in 1945, mainly as a DDT residual-spray operation. In 1946 more than 750,000 houses in 284 of the most malarious counties in the 13 southern states were sprayed. These operations were extended to nearly 300 counties in 1949. The effectiveness of the residual sprays is shown in

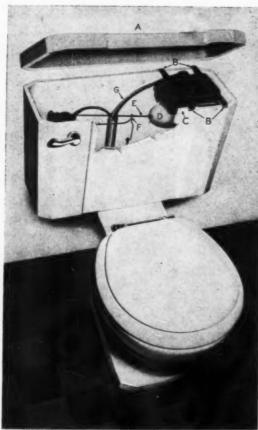
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the fact that during 1946, 1947, and 1948 only 1.0, 2.0, and 2.8 per cent, respectively, of sprayed houses had live *Anopheles quadrimaculatus* Say in comparison with 12.7, 28.0, and 16.7 per cent, respectively, for houses not sprayed (Bradley 1949).

Gnats and Sand Flies

MALL gnats called no-see-ums, punkies, or sand flies in the U. S. are extremely annoying and produce a marked dermatitis. They have not been convicted of carrying diseases in the United States, but they transmit filarid worms to man in West Africa.

Moth flies of the genus Phlebotomus also cause annoyance in parts of the U. S., but are not known to produce disease. Elsewhere these insects are the carriers of several severe diseases of man. In Peru and Colombia they transmit verruga or Carrion's disease, which was one of the major handicaps in the building of the Trans-Andean railway in Peru. In the Mediterranean area, the Near East, India, and China they carry Kala Azar and Oriental sore. Complete protection against these minute night-biting gnats can be secured by spraying DDT in and around habitations (Hertig and Fairchild 1946).

Buffalo gnats, or black flies (Simulium spp.) are persistent blood suckers and cause severe reactions in some individuals. They are known to kill livestock, apparently by injecting toxic substances. In parts of the world they transmit filarid worms, Oncho cerca, to both man and livestock. The larvae breed in rapidly flowing water and are susceptible to DDT, TDE, and methoxychlor in minute amounts. In tests carried out by the Bureau of Entomology and Plant Quarantine in Alaska a few flights of a spray plane (C-47) discharging DDT in oil across a stream at the rate of 0.1 pounds per

acre, killed the larvae for a distance of one to 21/2 miles downstream. Canadian workers reported a kill of larvae 92 miles below the point at which DDT in an oil solution had been applied to the Saskatchewan River at the rate of 0.14 p.p.m. Stream treatment with a DDT-oil solution carried out by Fairchild and Barreda (1945) gave good kills 10 kilometers below the point of application. Efforts to control worm nodule among the people by this means are being pursued in Guatemala, where onchocerciasis is prevalent, to determine its value in p. eventing that disease.

Flies in Relation to Disease

THE fact that flies play an important role in transmitting various diseases is well established. Horse flies and deer flies are painful biters, and in going from animal to animal or animal to man may inoculate healthy individuals mechanically with various pathogenic organisms including tularemia, anthrax, and surra. Although a vicious blood sucker with almost world-wide distribution, the stable fly has not been found to be a specific disease carrier, but it has been shown to be capable of transmitting anthrax and surra.

Trypanosomiasis. The tsetse flies are related to stable flies and are proved carriers of a number of diseases of livestock and man. Trypanosomiasis is one of the scourges of tropical Africa. It has prevented the utilization of vast areas for livestock raising and has kept the lives of the inhabitants in constant peril. The adult tsetse flies are sensitive to DDT, and tests of airplane application of that insecticide have shown much promise under certain conditions.

Enteric Diseases. The house fly is an effective carrier of many pathogenic organisms such as those of ty-

Much remains to be learned about the relation of insects to disease, and more research in this field, as well as on insect biologies and habits, methods of control and

hazards, is urgently needed, according to Dr. Bishopp.

phoid, dysentery, diarrhea and other enteric maladies, trachoma, and tuberculosis. Their filthy habits and close association with man give them abundant opportunity to distribute disease mechanically.

The general use of DDT in the South practically wiped out the house fly population during 1945 to 1948. This was true in rural areas where even in screened buildings flies had formerly swarmed over food. Late in 1948 and 1949 strains of flies resistant to DDT began to appear, and control was less decisive.

The infant mortality and morbidity due to diarrheal disease in the United States is still a matter of grave concern. It is difficult to determine the part that flies play in causing these diseases. However, it is undoubtedly an important one.

The extensive house-spraying program carried on against malaria provided some information on this question. Hemphill (1948) has studied the incidence of diarrheal diseases in rural areas in certain counties where the spray program was carried out in comparison with others where no systematic spraying was done but there was much use of insecticides in homes. He states that "There was a decrease approximately twice as great from 1944 to 1945 among rural decedents of 122 counties where DDT programs were carried out during 1945 as among rural decedents of 162 counties which began DDT programs in 1946, and approximately three times greater than among the remaining 1,579 counties of the 24 States."

In this program no effort has been made to prevent fly breeding through treatment or elimination of breeding places. Prevention of fly breeding has been advocated for years but it is difficult to get adopted. Fly control should never be left to insecticides alone.

Poliomyelitis. The serious epidemics of polio and the announcement that infected flies had been found in nature (Paul et al. 1941, Sabin and Ward 1941) caused insistent demand for fly destruction. Most people thought of this in terms of aerial spraying with DDT. However, there

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is little reason for relying on this method of attack. First, there is no concrete evidence on the extent to which flies disseminate poliomyelitis. Second, the occasional application of a light spray from the air has little value. Furthermore, there are many hazards connected with aerial spraying over towns, gardens, pastures, and fish pools.

The most effective plan is to inaugurate an area-wide program of fly supression by eliminating breeding places, treatment of dumps, prompt removal of attractive materials, proper screening, and the use of residual and space sprays. This program applies to blow flies as well as to house flies, and blow flies may well be carriers of polio, since they, as well as house flies, have been found infected.

A test in two areas of the effect of fly control by the use of DDT on a poliomyelitis epidemic has been reported upon by Melnick et al. (1947). He concluded that "A temporary reduction of flies was achieved in both areas," and "Under the circumstances, which were not ideal, there was no effect on the poliomyelitis epidemic in either area."

Myiasis. Sometimes fly larvae invade the tissues and digestive or urinary tracts of man and cause a disease known as myiasis. In the southern part of the United States and in tropical America people occasionally die from screw-worm attack. In the northern United States and Canada infants are sometimes infested with parasitic larvae of a fly, Wohlfahrtia vigil (Walk.). This fly often attacks and kills the young of rabbits, foxes, mink. and other animals. Larvae of a number of species of flies are involved in urino-genital and intestinal myiasis. Horse bots, sheep bots, and cattle grubs cause tremendous losses to stockmen, and these pests occasionally attack man. In man the horse bot and cattle grub larvae cause a creeping eruption in the skin; the sheep bot larvae invade the eyes. The subject of myiasis is discussed in more detail by Herms (1939) and James (1947). These parasitic insects are controlled largely by treating infested livestock with insecticides, whereas blow flies are com-

batted by disposal of carcasses, by proper handling of garbage, and by space, residual, and area spraying.

Fleas and Disease

LEAS carry black death or plague, murine typhus, and certain tape worms, and are so annoying that they cause families to vacate homes and laborers to leave farms. Insecticides are the major weapon in combating these pests both on animals and on infested premises.

The destruction of rodents that serve as reservoirs for plague and the control of the fleas that carry the disease from rat to rat and from rat to man are the two main lines of attack on this dread disease.

When a disease is present among a rodent population, the destruction of the rodents without appropriate measure against the fleas tends to increase the hazard to man. The history of death and terror produced by an epidemic of plague is well known, but many people are unaware that this disease is widespread among wild animals in some 13 western states and that each year plague is taking a considerable toll of men in many parts of the world.

Nicholson (1948) reported that, as a result of DDT dusting of rat runs, the number of oriental rat fleas, Xenopsylla cheopis Roths., was reduced by 99.3 per cent immediately after treatment and by 82.6 per cent 121 days later.

While the use of insecticides may hold down the incidence of murine typhus, it seems to me that satisfactory control of the disease will also require constant war against rats, including ratproofing and the intelligent use of rodenticides, fumigants, and traps.

Checking Disease Carriers

HEN we consider eradication of insects, we must also give attention to protecting freed areas. As a matter of fact, the same principles are involved and the same urge should exist to prevent the introduction of any dangerous disease transmitter into regions not already infested by it. This question is already receiving considerable attention, since these hazards have been made obvious with the network

of airlines and other fast means of transportation tying all parts of the earth closely together.

Barriers to the free movement of insects of medical importance consist mainly of control of all dangerous species around airports and docks and disinsectization of aircraft. In these operations insecticides play a major role. Insecticidal aerosols applied from so-called bombs have been very useful in destroying free-flying insects in aircraft. Uniform and proper distribution of the aerosols by fixed installation is certainly more reliable, however, and such installation should become standard equipment on all planes moving internationally. Residual sprays applied to the interior of aircraft add materially to the effectiveness of the aerosols in destroying pests that get aboard planes.

Conclusion

In closing I should like to emphasize that there are many important problems in the control of insect-borne diseases; that insecticides play a major role in meeting these problems; that there are numerous hazards in the use of insecticides in this field; that these hazards must be recognized and regardless of the effectiveness of an insecticide, its application must be correct and timely, and correct application requires suitable equipment and the right formulations of the insecticides.

Much remains to be learned about the relation of insects to human and animal diseases, and more research in this field, as well as on insect biologies and habits, methods of control, and hazards, is urgently needed.

It should be obvious to all that insecticides have contributed and will continue to contribute in a monumental way to the health, comfort, and general welfare of man.

Murine or endemic typhus is carried from rodents to man by fleas and perhaps by rat mites. Although not a highly fatal disease, it causes considerable disability. As many as 500 cases of the disease per 100,000 population per annum have been recorded in some counties in the southern states. The infection rate in rats in the South has been found by the U. S. Public Health Service to reach

(Turn to Page 175)



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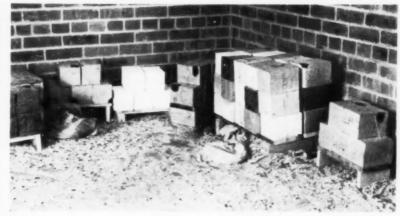


Fig. 1. Experimental cage showing installation of treated and untreated paper barriers which must be penetrated to obtain food.

Fig. 2. Damage to packages exposed to the attack of wild rats in "rattery."

Rodent Deterrents—Part II

By Jack F. Welch, James B. DeWitt, and Ervin Bellack *

Fish and Wildlife Service, U.S. Department of the Interior

O supplement and bring to a logical conclusion, the research being carried on in the laboratory, research field trials have been conducted with promising materials applied to small experimental boxes. To make the boxes attractive to rats they are partly filled with food. They are then sealed, using sodium silicate as the adhesive.

The deterrent materials selected for study have in the main been those showing the highest degree of repellency in feeding tests. The experiments have also included materials which alter the resistance of barriers because of the physical characteristics they impart to paper. Application of test materials has been made by impregnation, by dusting the raw candidate chemical on the surface made tacky with resin, by coating, or by wrapping the box with sheets of film as in the case of plastics.

Chipboard boxes having the dimensions of 4x3½x3 inches were used in the early tests. Usually 10 boxes of each treatment were prepared. These

were wired together in chains of 10, the boxes being randomized in each chain to include nine different treatments of candidate material and one untreated box. This was replicated 10 times.

Exposure, for the most part, was made at city dumps where small structures had been built to house the boxes so as to protect them from weather and vandalism. Rats could enter or leave at will through small openings made at intervals of four feet along the base of the rat "house." Before starting a test, palleted food, used as bait in boxes, was exposed openly to attract and condition the animals to such food.

Daily inspections were made and the number of boxes entered recorded. No effort was made to record penetration time in units of less than a day, as this was not practical. Under these field conditions it was unusual to find boxes penetrated during the first 24 hours, there seemingly being a period of adaptation before the animals began attacking the boxes. As in barrier tests the relative rates of penetration of untreated and treated boxes

for replicated groups gave an index of the efficacy of the test material as a deterrent. Where a certain treatment showed particular promise, this was included in subsequent tests as a reference.

Although more than 200 candidate chemical compounds and materials possessing physical deterrency were studied under such field conditions, the need of having the facilities in which animals could be controlled and over which the experimenter had complete authority soon became apparent.

During the course of the work we were constantly harassed by vandalism and the rat populations were curtailed at intervals by control operations conducted by the City Health Departments. This led to the acquisition of facilities and the establishment of a "rattery" at what is known as the Federal Center west of Denver, a wartime reservation now extensively used by various Federal agencies. Here wild rats are maintained under conditions that simulate those prevailing in warehouses and those of outdoor storage. The unit simulating warehouse

Mr. Welch is with the Wildlife Research Laboratory, Denver, Messrs, DeWitt and Bellack are connected with Patusent Research Refuge Laurel, Md.



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storage consists of a two-room brick building which has been ratproofed to prevent animals from escaping. These rooms are approximately 10 feet long and eight feet wide, separated by a solid brick partition. Each has double doors leading to the outside of the building. The inner door is made of a framework covered with hardware cloth and is set in so that the experimenter can close the outside door behind him before entering the room. Ventilation is provided by a vent in the roof.

Facilities for maintaining the rats include a large nest box, a water font, and ample harborage in the form of burlap sacks, rags, and paper. The latter is quite important as it serves to make nesting material and hiding places. The lack of adequate harborage tends to encourage fighting, at least until the animals become accustomed to one another and their new surroundings. Even under these conditions we have found it necessary to add rats weekly to compensate for losses. A count is made each Monday and new animals are trapped as needed. Attempts have been made to maintain fifteen animals in each room. No effort has been made in the experiments to segregate animals as to sex or age.

Tests in the "rattery" are carried out in much the same manner as described under field studies. Instead of tying the boxes in chains, however, both treated and untreated boxes are stacked on small skids or racks to simulate warehouse conditions. Here, also, a heavier walled box is being used to

afford more resistance to the animals. Prior to placing the boxes in the room the rats are allowed some time to become "established." Detailed records are kept of pertinent data.

At the start of these studies little information was available as to the experimental procedure to follow in conditioning animals. To begin with, the rats were given ample food at all times. This failed to motivate them, however, and the attack on boxes was nil. A procedure was then adopted whereby they were given a reduced diet amounting to an average of 10 grams of food per animal, three times a week. The food was ground and exposed in a large feeding dish to make it available to all animals, thus preventing aggressive individuals from caching it, which is often the case with pelleted food. If all the ground food is not eaten, none is added when the time comes for replacing.

To motivate them further, two untreated boxes are opened by making a small cut at one corner. This has served to acquaint the animals with the contents. As in the case of laboratory animals, it has been found that all wild rats are not equally active in their gnawing habits. The source of the animals may have a bearing on this. To consider all possible variables additional experiments are necessary, and appraisal of candidate deterrent materials under these experimental conditions has been accomplished.

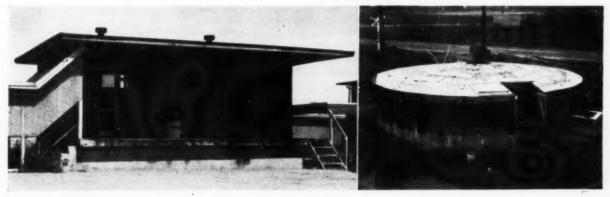
Though just being put into operation, facilities for evaluating deterrents under conditions simulating outdoor storage are completed. This consists of a concrete lined circular pit nine feet deep and 28 feet in diameter, the nearly flat 100f of which is conical and stands approximately three feet above the concrete wall. The space between the top of the pit and the roof is lined with mesh hardware cloth. This and a 12-inch sheet metal overhang at the top of the pit prevent animals from escaping should they be able to climb the wall. The bottom of the pit is covered with approximately two feet of sandy soil to simulate outdoor conditions. Here rats will be able to burrow. A ladder mounted in the concrete at one side coinciding with a large door in the space between the roof and the top of the pit allows materials to be taken in and out of the pit. Studies similar to those described above are to be conducted here.

Results and Discussions

Chemical Repellents: Nearly 2,500 chemical compounds have been evaluated for their repellent effects by the food acceptance technique. It has been found that repellency to rats may be correlated with chemical composition. Many classes of chemical compounds, such as the carboxy acids, alcohols, amides, esters, ethers, and nitriles, give little or no indication of repellent activity. On the other hand, many fatty amines and their salts, guanidines, and quaternary ammonium, pyridinium, nicotinium, and quinolinium salts have shown marked repellency under the test conditions. Because of this observed correlation, it has become possible to eliminate many classes of com-

Fig. 1. Building utilized as "rattery." Double doors leading to each room can be seen.

Fig. 2. Concrete pit "rattery" used to simulate out-of-door storage conditions. The floor of this pit is covered with earth permitting wild rats to burrow and live a near normal life.



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pounds from consideration, and to concentrate attention upon more promising materials.

Though a considerable number (approximately 10 per cent) of potentially promising materials based on these tests have been found, the demonstration of the utility of these in barrier control is still not fully investigated. The problem is complicated by the fact that a'rat may be able to gnaw through an obstruction such as a paper barrier or box without ingesting the excised particles, and by the fact that the efficacy of a repellent, when applied to paper, may vary according to the method of application and the concentration per unit area.

Evidence of this was borne out in studies with over a hundred candidate compounds found effective when mixed with food but which, when applied to barriers and test boxes, failed to prevent penetration for any considerable length of time. Experiments designed to analyze this were not long in disclosing the reason.

It was found that individually caged rats could gnaw through barriers consisting of chipboard treated with the highly toxic compound "1080" without ill-effects to themselves, even though the quantity of paper removed contained sufficient poison to kill 15 animals. This was true both when the poison was impregnated in the barrier and when it was applied to the surface in an adhesive. However, when the test barrier consisted of five sheets of Kraft paper, laminated with a synthetic latex, and with the "1080" added in an adhesive, all test animals died before, or shortly after, piercing the barriers. Further evidence of this ability of rats to gnaw through paper without ingesting appreciable amounts of a compound applied to it resulted from experiments conducted with dyes, pigments, and flourescent compounds used as tracers. Animals ingesting food containing these materials, when chloroformed and autopsied, were found to present a very vivid picture as a result of having eaten the bait. This was particularly evident when a green pigment (Monastral Fast Green) was used. He:e the mouth parts, fecal droppings, and alimentary . tract were brilliantly colored. Animals which gnawed an equivalent amount of pigment from barriers failed to show this coloration. On autopsy, except for the front feet and hair about the mouth, little evidence of contact with the pigment was found. It is because of the foregoing circumstances that the application of chemical repellent compounds directly on trees and garden and other agricultural crops has

A COMPLETE report of the 27th annual trade show and convention of the National Sanitary Supply Association, being held May 7-10, at the Hotel Drake, Chicago, will be carried in the June issue of SOAP & SANITARY CHEMICALS. In addition to an account of the business sessions of the meeting, the list of exhibitors and their merchandise will be presented.

met with greater success, the spray or paint becoming a part of that portion of the plant actually ingested by the animals.

It is apparent the rat's activity in gnawing through a paper barrier does not involve ingestion of all, or even an appreciable proportion of the material removed. It might be questioned, then, as to whether the results obtained in food acceptance furnish an index to the efficacy of the test compounds when applied to papers. In order to investigate this point, a series of experiments involving nearly 40 compounds and nearly 400 barriers was conducted. All compounds were applied at a concentration of 0.05 grams per square inch to barriers composed of five sheets of Kraft paper laminated with a synthetic latex. It was found that compounds giving a low repellency index (below 80) in the food acceptance tests produced little change in the time required to pierce the barriers (F6=1.21); that compounds having K values between 81 and 90 gave an average F=4.44; and that compounds having K values between 1 and 100 gave an average F=5.95.

In the current investigation, attempts to obtain more satisfactory results are being made by using more resistive barriers and boxes prepared to increase the strength of the obstruction so that rats would be in contact with the repellent for a greater length of time. The method of inclusion and the concentration of the chemical has also been found to have bearing on the rate of penetration. The necessity of keeping the concentration within limits that could be utilized economically and safely also must be kept in mind.

Summary and Comments

A SEARCH for rat deterrents applicable to packaging material has been made and techniques devised for the appraisal of chemical and physical repellents under laboratory and field conditions. This has been accomplished by a procedure involving (1) food acceptance tests, (2) barrier tests, and (3) field tests. To facilitate the latter phase of the problem a "rattery" has been established near Denver to appraise candidate deterrent materials. He.e wild rats are maintained under conditions simulating those prevailing in walehouses and out-of-door storage.

Chemical repellents, when applied to paper, have not been as effective in preventing rat attack as would be expected based on results obtained in feeding tests. Experiments disclosed that a rat in penetrating an obstruction such as a paper barrier or box, ingests limited amounts of a candidate chemical applied to it and consequently the repellent effect is less p.onounced than when the same compound is mixed inseparably with food. To establish the ultimate utility of candidate chemicals, additional tests designed to determine the most effective manner of application to paper are being conducted.

Materials, which harden, toughen or in some other way alter the physical make-up of paper so as to make it more difficult for rats to penetrate have been and will continue to be studied. In tests conducted so far, this type of deterrent afforded greater resistance to rats than "chemical" compounds as determined by the screening tests. There is reason to believe, however, that some of the latter compounds may be useful in preventing damage by field rodents and rabbits which actually ingest the material removed.

Though prog: ess has been made (Turn to Page 177)

^a time (in minutes) to penetrate treated barrier time (in minutes) to penetrate untreated barrier

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Editorials

(From Page 36)

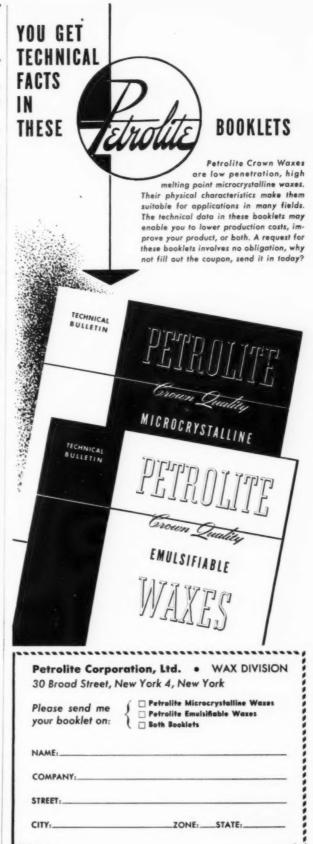
buyer remembers few if any, of the brand names, and if he does, he is unable to identify them with the type of product or the maker.

When manufacturers come up with "Gusho," "Zippisuds," "Fuzolax," and a host of others just as silly, we always feel that they are inviting the buyer to forget their products. What's wrong with the company name or an established key brand name plus a descriptive title. — Iones Mild Liquid Hand Soap, or Jones Heavy Duty Powdered Hand Cleaner? The buyer then knows what it is and who makes it, - and what is more important, he has some chance of remembering these facts in the everlasting confusion of meaningless coined product names. Of course, if a manufacturer is going to spend a million dollars popularizing one or two brand names, that is a horse of another hue. But how often do such conditions apply to marketing of industrial cleaning and sanitation products?

Not all marketers agree with this view insofar as coined names are concerned, for witness the endless list of such in use today. But we often feel that these marketers are indulging their fancies rather than facing the cold facts of product identification and selection by consumers. We know it's just ducky to have a nice long list of tricky names for everything in the sales catalog, — looks swanky and is undoubtedly soul satisfying to the seller, — but when the names are just part of a jillion others and a welter of confusion in the buyer's mind, wherein lies their sales value?

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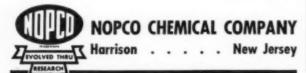
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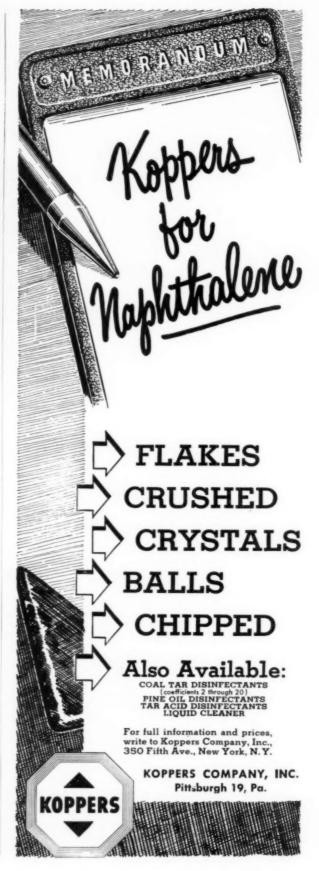
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Detergents In U. K.

(From Page 39)

February 1947) useful—as also the methods of analysis given by A. Parisot (Corps Gras, 11-14, 1946).

In general, attempts to use synthetic detergents and soap together, in one and the same preparation, are not likely to prove successful. The addition of soap to quite a number of synthetic detergents shows a definite tendency to reduce foam formation and all-over detergent action. Thus J. C. Harris, in his excellent paper on "Builders with Synthetic Detergents" (Oil & Soap - now J.A.O.C.S., April 1946) found that combinations of soap and alkyl benzene sulfonate tested in low solution concentration showed synergistic action in only one of six cases, whereas all showed distinct detergent minima, corresponding to a point where lather is at a minimum and pH values drop below that for soap alone. Presence of sodium sulfate tended to reduce the detergency of the soap-synthetic mixtures, though the effect of electrolyte in improving detergency of the synthetic agent (apart from soap) was indicated.

Harris' findings, corroborating those of many other workers, emphasize the importance of proceeding with care when admixing soap and synthetics. On the other hand, the point should also be stressed that effective mixtures are not beyond the bounds of possibility. Mixed all-purpose soaps were devised during the war period, and several patent specifications refer to such mixed preparations. Thus U. S. patent 2,438,169 relates to a solid detergent "in satiny cakes," consisting of starch, soap and selected synthetic detergents. An example quoted is as follows: Tallow soap, 15 to 55 parts; corn starch, 20 to 30 parts; and 20 to 60 parts of a synthetic detergent derived from petroleum, such as the U. S. products "Nacconol" and "MP 189." The mass, which should contain from six to 15 per cent maximum of water, is milled and plodded in the usual manner.

The relative proportions of sodium sulfate or other electrolyte, sodium carbonate or other alkaline salt, required to attain optimum detergency and foam formation when in solution with synthetic detergents, are dependent upon the exact type of the latter being used etc., and are to be determined only by experiment. In liquid preparations, the addition of selected solvents may also be considered.

Synthetic Powders and Liquids

THE table reproduced herewith shows analytical figures for four U. K. synthetic detergent powders. Product A is, in my view, an excellent preparation. Readily soluble in cold distilled water to give a clear solution of pH 7.4, it is also effective in hard water. The phosphate is present as buffered sodium hexametaphosphate, and is of course a sequestering agent for calcium and magnesium salts. The detergent, very stable in character, appeared to be an alkyl aryl sulfonate. The detergent properties for moderately soiled white wash were good: heavy soiling did not show up quite so well, however, with a short laboratory run of experiments. This product is non-irritant to the hands, of uniform particle size, and very pleasant to use.

Product B also proved readily soluble in cold distilled water, giving a slightly turbid solution of pH 9.8. Effective in hard water and on moderately soiled white wash, it may be classed as a good preparation of its type. Product B, however, has an excessively high content of sodium carbonate and a still higher pH (10): though in the official "dishwashing and scrubbing" class, it might inadvertently be used for washing woolens, etc., with disastrous results. It would not be too kind to the hands, though probably no worse in this respect than many other household cleaning materials. Product C, a straightforward sodium sulfate dilution of a sodium alkyl sulfate, may be regarded as satisfactory. It could be improved by the inclusion of a higher proportion of detergent, but as constituted is not likely to damage fabrics or the skin.

The use of sodium sulfate as a filler or builder in these powders is easily understood, as it is already present in most of the basic synthetic detergents as commercially produced, in addition to which it enhances the total detergent effect. What is chiefly noteworthy, perhaps, is that other additions appear to be confined largely to sodium carbonates. One would imagine that the phosphates, silicates, borax and borates might also find application in this direction.

Liquid synthetic detergents in the U. K. are usually aqueous dilutions of sulfated fatty alcohols, aryl naphthene sulfonates and, to a much smaller extent, alkyl aryl sulfonates. Diluents found in marketed preparations include sulfonated castor oil, glycerin and glycols. Traces of gum or gum substitutes are sometimes included to increase viscosity. A few per cent or less of ammonium chloride, to improve stability in cold weather and increase lathering, may also be found. Added alkalies are sometimes included in small amounts. Of a more specialized type, suitable for the cleaning of clothes, carpets, etc. and the removal of stains, are those preparations that contain organic solvents as well as synthetic wetting agents.

The following formulae are indicative of the general type of liquid preparation:

	1.	er cent
1.	Sulfated sec. fatty alcohol	35
	Sodium sulfate	3
	Ammonium chloride	1
	Tetrasodium pyrophosphate.	2
	Pine oil	0.5
	Water, distilled or deionized,	
	to make	
	p	er cent
2	Sulfated fatty alcohol	28
	Alkyl aryl sulfonate	5
	Ammonium chloride	1.0
	Sodium carbonate	1.0
	Ammonium phosphate	1.0
	Perfume compound	
	Water, distilled, to make	
	p	er cent
3.	Synthetic detergent	
	(selected)	40
	Chondrus mucilage (1 in 20)	12
	Sodium sulfate	3
	Tetrasodium pyrophosphate.	1.5
	Perfume compound	0.5
	Water, distilled, to make	100
	p	er cent
4.	Sulfated fatty alcohol	25
	Sulfated castor oil	10
	ent t	

Many other variations on this theme will doubtless occur to the experimenter. Packing in steel contain-

Pine oil : 0.
Water, softened, to make . . . 100

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ers is obviously risky, especially when electrolytes are present in solution: the wetting action of the detergent greatly facilitates reaction with the metal surface, giving rise to discoloration and deterioration. Metal containers, if used, should be well tinned or lacquered internally, the pH of the preparation should be kept as near neutral as possible, and a trace of a suitable corrosion inhibitor may be included.

Glass and window polishing liquids frequently contain ethyl or isopropyl alcohol, but equally effective preparations consist simply of dilute aqueous solutions of sulfated secondary fatty alcohols or other synthetic detergents.

Synthetic Bar Detergents

THE U. S. Quartermaster Corps specification for all-purpose soap, followed by the much less informative British Government specification for general purpose soap (C.S. 2019A), paved the way for current work on synthetic detergents in bar or tablet form. It will be recalled that the all-purpose soap was of various grades, the composition of one of which may be briefly outlined as follows:

		Sec. 12.0
Synthetic detergent		
Soda soap, anhydrous		25
Moisture and matter volatile	3	
at 105°C	12	-25
Inorganic salts	10	-20
Unsaponifiable and insoluble		
matter		3.5
Rosin		2

ner cent

The difficulty of obtaining the desired synergistic action of soap and synthetic detergent has already been mentioned. British bar and tablet detergents, with one or two exceptions, show a much higher figure than 3.5 per cent for unsaponifiable and waterinsoluble matter. Apart from the synthetic detergent itself, present in paste, powder or liquid form, these "soap substitute" cakes frequently contain china clay, as a cheap, semi-colloidal filler, synthetic waxes, non-ionic wetting and emulsifying agents, and a binder of the casein or gum substitute type.

One early product, now replaced by a notably improved modification, is said to have consisted of synthetic detergent, china clay, syn-

thetic wax, emulsified wax and rosin. Its outstanding defects were poor lathering power, the "feel" of a scouring tablet, unpleasant odor, and a most unattractive mushiness after contact with water. The improved version is said to consist of a substantially pure sodium secondary alkyl sulfate, a small proportion of an alkyl aryl sulfonate, sodium acid phosphate, sodium sulfate, a trace of dispersed lanolin and a little alginate mucilage as a binding agent. The lathering power has been improved, together with the general detergent properties, and the cake no longer crumbles to a mushy mess when left in a wet condition. This preparation, by the way, is marketed for general household cleansing purposes and does not claim to be a substitute for toilet soap.

The use of alginate binders was first suggested by me in Soap, Perfumery and Cosmetics in December

"The chief fault to be guarded against is friability, or the tendency to crumble. A tablet that simply disintegrates when introduced into water has very obvious disadvantages. It should be noted that semicolloidal fillers such as china clay and fuller's earth, as well as the more definitely colloidal bentonite, are noted for their tendency to disintegrate (see, for example, British Patent specification 590,275)—for this tendency is, of course, closely connected with their utility as dirtsuspending agents. What is required, in brief, is not that this quality should be absent, but that it should be properly controlled.

"The choice or elaboration of a really good binding agent seems to present the greatest difficulty. Among those that may be suggested for experimental purposes are cel-lulose esters such as "Cellofas" lulose esters such as "Cellofas" (I. C. I.), alginates such as "Manucol" (Albright & Wilson), natural gums and other hydrophilic colloids, and possibly synthetic resins plastics. The polyglycols should be considered, also casein. The presence of neutral salts, e.g., sodium chloride, may serve to assist the binding action by increasing viscosity (but note Brit. Pat. 590,839). will doubtless be apparent that enhancing solubilization will necessarily favor disintegration unless the rate of solubilization is slowed down and controlled, by the choice of a suitable agent or combination of agents. Further research may well lead to the discovery of synthetic detergent tablets that will not depend for their solid form upon the conventional base of china clay, etc., plus binding agents."

It is very difficult, in view of the technical difficulties involved and bearing in mind the patent situation, to hazard definite suggestions in regard to formulation. A possible base in which to incorporate the necessary foaming type of wetting agent would be a product of the higher molecular weight polyethylene glycol type. At present, however, the cost of such products is relatively high-added to which they are incompatible with most natural waxes, ester gum, shellac, methyl and ethyl celluloses, gum arabic, castor and olive oils, mineral oil and gelatin. They are, however, partly compatible with casein, rosin and urea-formaldehyde resins; and fully compatible with chlorinated starch.

Bearing in mind the difficulties referred to, the following formulae may be considered as possible startingpoints for individual experimentation:

				parts
1.	Synthetic	detergent	paste	25
	Polyethyle	ene glycol		
	(e.g. "C	Carbowax	4000")	75
	Diluent (inert fille	er)	q.s.

The filler may be a clay of the semi-colloidal kaolin or the grit-free bentonite (Volclay) types. It is possible that a soluble starch of the chlorinated variety or a solubilized casein might also be useful for their binding properties. Liquid and powder forms of synthetic detergent may be employed instead of pastes.

		parts
2.	Sulfated f.a. powder	10
	Sulfated f.a. liquid	25
	Colloidal kaolin	
	Gum karaya	
	(15 per cent mucilage)	
	Titanium dioxide	2
	Color and perfume	q.s

The titanium dioxide is useful to whiten up the preparation. Other gums and gum substitutes may be used in place of gum karaya. Vary the pigment/liquid ratio to control consistency.

		parts
3.	Sulfated f.a. powder	40
-	Borax, powdered	
	Bentonite, grit-free	
	Methyl cellulose (4 per cent	
	aqueous dispersion)	30
	Color and perfume	q.s.

Vary the solid/liquid ratio to attain desired consistency.

The possibility of using casein or a dispersed plastic resin as binding

(Turn to Page 177)



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TRADE NEWS

Operate Allaire Woodward

I. P. Callison & Sons, Seattle, Wash., recently took over the management and operations of Allaire, Woodward & Co., Peoria, Ill., producers of pyrethrum extract. Callison research facilities, and new processes and equipment are being made available to the Peoria concern. Improvements and expansion of plant and research facilities of Allaire, Woodward & Co., are under consideration also.

Plowfield Mfrg. Agent

William R. Plowfield, formerly director of industrial sales of R. M. Hollingshead Corp., Camden, N. J., recently became a manufacturers' agent with display and sales rooms at 2015 Passyunk Ave., Philadelphia. At one time regional manager in Canada for West Disinfecting Co., Long Island City, N. Y., Mr. Plowfield was more recently sales director of Phipps Products, Inc., Boston. He is also a past president of Flyosan Co.

New Boyle-Midway Units

New sales divisions announced recently by Boyle-Midway, Inc., Jersey City, N. J., include New York State, with headquarters in Albany; midwestern, with headquarters in Omaha and Savannah-Wilmington.

Divisional managers appointed for the new organizations are: New York, Lewis Seymour, who has been with the firm since 1945; mid-western, Carl Dennison, who supervises sales in Colorado, Nebraska, and Iowa, and with the concern since 1936, and Savannah-Wilmington, W. L. Fountain, Jr., with Boyle-Midway since 1939.

New Aer-a-sol Sales Head

Walter E. Anderson, who until April 1, was in charge of midwestern Aer-a-Sol sales for the company, was recently named sales manager of Aer-a-Sol products of Bridgeport Brass Co., Bridgeport, Conn. He had served the department as head of sales for the midwestern territories for the past 15 months. Mr. Anderson is now associated with John H. Mills, sales



WALTER E. ANDERSON

manager of the consumer products division, and is making his headquarters at the East Main Street plant in Bridgeport, where, under the new plan of organization announced by Herman W. Steinkraus, president and general manager, the Aer-a-Sol sales and advertising division is now located.

Johnson Opens in Dallas

The opening of a Southwest sales office at 301 North Market St., Dallas, was announced recently by Miss Kay Johnson, whose brother is president of Gaston Johnson Corp., New York household insecticide manufacturer. The firm makes "No-Roach," insecticide and an ant killing preparation. Sales in the Dallas territory, portions of Oklahoma, Louisiana and Arkansas, will be handled through the new southwestern sales office.

New "Clic" Floor Cleaner

A new neutral liquid cleaner for use on linoleum, rubber, asphalt tile, terrazzo, etc., was announced recently by Freesmeier Laboratories, Inc., St. Louis. Designated "Clic" rinseless floor cleaner, the compound is said to be effective in removing solid soil on a variety of surfaces not affected by water. Packaged for industrial use only in five, 15, 30 and 55 gallon drums, "Clic" is recommended by the maker in preparing floors for waxing.

McCormick Advances Two

Bernard Weiser, director of general sales has been elected a vice-president of McCormick Overseas Co., export division of the parent organization, and John L. Buckley, Jr., chief accountant, has been appointed comptroller, it was announced recently by McCormick & Co., Baltimore.

Mr. Weiser is a member of the board, having previously served three times as chairman of the junior directorate, of which Mr. Buckley is now chairman.

Klarmann Completes Trip

Dr. Emil G. Klarmann, vicepresident in charge of research of Lehn & Fink Products Corp., Bloomfield, N. J., recently returned from an extensive trip to South America. Accompanied by his wife, Dr. Klarmann visited Puerto Rico, Trinidad, Brazil, Uruguay, Argentina, Chile, Peru and Panama. He studied conditions in raw material producing centers.

Simmonds in Europe

George Simmonds of U. S. Sanitary Specialties Corp., Chicago, and his wife recently flew to Europe for a visit. In Paris the Simmonds were joined by their son-in-law and daugher, Mr. and Mrs. Arthur Halle. In addition to visiting Paris, the group expects to visit the Riviera and Switzerland. The Simmondses will return in June to open their home in Highland Park, Ill.

Lehn & Fink Profit Down

A decline in its net profit for the nine months to March 31 as compared with the like period a year earlier was reported recently by Lehn & Fink Products Corp., Bloomfield, N. J. In the period ended March 31, 1950 a net profit of \$379,041, equal to 94 cents a share, as against \$408,522, worth \$1.02 a share for the nine months ended March 31, 1949, was reported.

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New Chi. Sanitation Firm

Sanitation Products & Janitor Supplies was opened May 1 in Chicago, to handle a complete line of sanitary maintenance supplies both wholesale and retail. The project will be operated as a division of A-Veri-Best Exterminators, whose proprietor, Jules B. Smith, has for twenty years provided a pest control service in Chicago and suburbs. The new enterprise occupies a remodeled portion of the building at 4817-19 Cottage Grove Ave., which has served as headquarters for Mr. Smith's exterminating and fumigating activities.

Kilgore Chemicals Merger

The research, engineering, and marketing facilities of Kilgore Chemicals, Inc., Washington, D. C., and Atlantic Research Corp., Alexandria, Va., have been merged, it was announced recently. Anthony Haas, formerly general manager of the Kilgore company is head of the newly established Kilgore Chemical Division of Atlantic. The new division is directing its activities toward expanded development, manufacture and sale of specialty chemicals in the insecticide, fungicide and industrial deodorant fields.

First major operation of the new division is to be the establishment of distributorships on a national scale for "Odorex," an aerosol type industrial deodorizer containing "Metazene," an odorless chemical, on which Kilgore is the patent holder.

Dairy Barn Fly Control

"Control of House Flies in Barns with Different Insecticides" by I. H. Gilbert, H. G. Wilson and J. M. Coarsey of the Division of Insects Affecting Man and Animals, BEPO, U.S.D.A., a paper originally presented before the Tampa, Fla., meeting of the American Association of Economic Entomologists, Dec. 13-16, 1949, is now being distributed by the U.S.D.A. The paper reports on studies made in the vicinity of Miami and Orlando, Fla., last year, in dairy barns with residual treatments of various insecticides against some resistant flies. Chlordane, DDT and mixtures of the two,

as well as DDT and methoxychlor and dieldrin, toxaphene, and lindane were used.

Canco Names Hepenstal

The appointment of R. F. Hepenstal as assistant general manager of manufacture of American Can



Co., New York, was announced recently by R. C. Taylor, vice-president in charge of manufacturing. Mr. Hepenstal continues to make his headquarters

in the container manufacturing company's general offices in New York where he has served as manager of manufacture for the Atlantic division since 1948. He has been with the firm since 1925.

"Rax" Rodenticide Report

A summary of the first 100 reports received at its office on "Rax" rat and mouse powder, based on "W.A.R.F. Compound 42," the anti-coagulant rodenticide developed by the Wisconsin Alumni Research Foundation, was announced recently by R. J. Prentiss & Co., New York. The summary lists the states from which reports have been received; types and degrees of infestations treated; types of establishments treated, whether agricultural, residential or industrial; types of baits used; degree of control obtained and commentary and summary.

Because the rodenticide is restricted to experimental use by pest control operators, public health officials, sanitary engineers and Fish & Wildlife Service personnel, all of whom must submit reports, a fairly accurate check on results has been possible.

The summary of the report states that complete control of Norway rat, Alexandria rat and house mice, is possible, even in severe infestations or where reinfestation is apt to occur. No accidental or secondary poisoning to humans, livestock, pets or poultry has been reported, according to the summary.

New Silicone Car Polish

The use of Dow Corning Corp., Midland, Mich., silicone resins in new automobile polishes made by Boyle-Midway, Inc., subsidiary of American Home Products Corp., New York, was announced recently. The new polishes are being sold under the trade name "Autobrite," and are priced at 98 cents a bottle, which is said to be enough to polish three cars. Other claims for these new polishes are that they are easily applied, long-lasting (six months, the company states) and water repellent.

Other producers of silicone auto waxes include Tone Manufacturing Co., Grand Rapids; Wilco Co., Los Angeles and Wax Silicone Products Co., Miami.

F.T.C. Cites Rodenticide

Carbola Chemical Co., Natural Bridge, N. Y., was recently cited by the Federal Trade Commission for allegedly misrepresenting "CCC Liquid Rat and Mouse Destroyer." The complaint challenges representations that the product will kill all mice and rats on the premises and that after eating the product they will go outdoors to die. The complaint further alleges that the product will not kill mice and while it is toxic to rats it will not destroy all those on the premises and that there is no assurance they will go outside to die.

"Tritons as Emulsifiers"

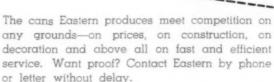
A four-page technical bulletin (S-7), "The Emulsification of Chlordane with 'Tritons'," first in a series on the emulsification of the more common chlorinated insecticides, was issued recently by Rohm & Haas Co., Philadelphia. Typical formulas for chlordane emulsion concentrates, evaluation of formulas, physical characteristics of the "Tritons" used for emulsifiers and similar data are included in the folder.

Fern Chemical Incorporates

Fern Chemical Corp., directors of which are Samuel Collins of Bronx, N. Y., Meyer H. Slack of Flushing and Beatrice Lazarus of Brooklyn, was incorporated at Albany, N. Y., recently. The firm deals in disinfectants and other chemicals.



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LIQUID SOAP SPECIALISTS

C.S.M.A. June Program

TENTATIVE program details for the mid-year meeting of the Chemical Specialties Manufacturers' Assn., being held at the Drake Hotel, Chicago, June 12-13, were announced recently. The five divisions within the CSMA meet simultaneously beginning on Monday afternoon, June 12, following a group luncheon. Monday morning there is to be a general session. Group meetings continue through Tuesday morning, the afternoon of which a short business meeting will be held. The banquet is Tuesday night. Melvin Fuld of Fuld Brothers, Inc., Baltimore, is program chairman. The tentative program follows:

Monday Morning, June 12 GENERAL SESSION

"Centralized Purchasing vs. Freedom of Enterprise," by C. L. Rothermel. National School Service Institute. Chicago; Report of Committee on Toxicity. Dr. Clyde W. Kearns, University of Illinois; "The American Medical Association's Program on Insecticide Toxicity," by Dr. Bernard E. Conley, Secretary Committee on Pesticides, Council of Pharmacy & Chemistry, AMA.
Chicago; "Do's & Don'ts in Advertising
& Selling," by P. B. Morehouse, director, Division of Stipulations, FTC, Washington.

GROUP LUNCHEON Monday Afternoon, June 12 AEROSOL DIVISION

E. Peterson—Presiding

H. E. Peterson—Presiding
"Aims and Purposes of Aerosol
Division," by H. E. Peterson, Continental Filling Corp., Danville, Ill.
"Propellents," by Dr. D. Dowing,
Kinetic Chemicals, Inc., Wilmington;
"New Developments in the Aerosol
Field," symposium, H. E. Peterson—
mederator. moderator.

DISINFECTANT & SANITIZERS DIVISION

Dr. E. G. Klarmann-Presiding "Aims and Purposes of the Disinfectant and Sanitizers Division," by Dr. E. G. Klarmann, Lehn & Fink fectant and Sanitizers Division," by Dr. E. G. Klarmann, Lehn & Fink Products Corp., Bloomfield, N. J.; "Antiseptic Liquid Soaps," by A. G. Bowers, chief chemist, Hunt Mfg. Co., Cleveland; "Anionic Dishwashing Compounds Incorporating Non-Toxic Germicides," by Lawrence Flett, National Aniling Division Allied Chemical Aniline Division, Allied Chemical & Dye Corp., New York; "Public Health Aspects of Sanitation," by Major Joel L. Connelly, asst. to president, Chicago Board of Health, and H. M. Toombs, Chief Engineer, Stevens Hotel, Chicago; Motion Picture, "Evaluation of Antiseptic Soaps," by Dr. A. Cade, • Sindar Corp., New York.

INSECTICIDE DIVISION

T. Carter Parkinson-Presiding

"Aims and Purposes of the Insecticide Division," by T. Carter Parkinson, McCormick & Co., Baltimore; "The Role of the Consulting Laboratory in the Development and Testing of Insecti-cides," by Dr. L. C. Barail, U. S. Testing Company, Hoboken, N. J.; "Inserticide Marketing Developments," by Dr. L. B. Kilgore, Chief, Chemicals Division. Dept. of Commerce, Washington, D. C.; "Toxicity Hearings," by John Conner, General Counsel, Chemical Specialties Manufacturers Association, Washington, D. C.; "Tentative Methods of Testing for Resistance of Methods of Testing for Resistance of Textiles to Insect Pests," C. S. M. A. Method, by Dr. G. R. Ferguson, Geigy Co., New York; "Studies on Insecti-cide Resistance of Flies and Mosquitoes," by Dr. E. F. Knipling, in charge, Division Insects Affecting Man & Ani-mals, Bureau of Entomology & Plant Quarantine, U. S. Dept. of Agriculture, Washington, D. C.; "insecticide Resistance House Fly Studies in California," or. Raigh B. March, University of California, Berkeley.

SOAP, DETERGENTS AND SANITARY CHEMICAL DIVISION

H. W. Zussman, Alrose Chemical Co.,

Providence, R. I., Presiding "Aims and Purposes of the Soap, Detergents and Sanitary Chemicals sion, H. W. Zussman; "Fatty Acids," A symposium on the uses of fatty acids well as composition and specifications. Moderator: A. G. Peck, Peck's Products Co., St. Louis.

WAXES AND FLOOR FINISHERS DIVISION

Bayard S. Johnson, Franklin Research Co., Philadelphia, Presiding "Carnauba Wax Outlook," by A. J. Bohart, president of American Wax importers and Refineries Association, "Carnauba Wax York; New York; "Carnauba Wax Assay, by Prof. Charles Marsel, College of Engineering, New York University, New York; "Sugar Cane Wax," by El-New York; "Sugar Cane Wax," by Elbert S. McLoud, chief research chemist, S. C. Johnson Sons Co., Racine, Wis.; "Paraffin Waxes," by Donald Jones, Staff Engineer in charge Oils and Waxes, Atlantic Refining Co., Philadelphia; "Resin Water Emulsion Waxes," by H. I. Mellan Durez Plass. Waxes," by H. J. Mellan, Durez Plastics & Chemical Co., North Tonawanda,

Tuesday Morning, June 13 JOINT SESSION—AEROSOL DIVISION AND INSECTICIDE DIVISION

T. Carter Parkinson and H. E. Peterson, Presiding

Allethrin Symposium, Dr. Alfred Weed, moderator, John Powell & Co., New York; a) "The Nature of Allethrin and Its Specifications," by Dr. C. D. Fischer, Carbide & Carbon Chems. Corp., New York; b) "Toxicity of Allethrin with rarticular Reference to Rats," by Donald F. Starr, S. B. Penick & Co., New YOLK; c) Standardization, Analysis, and Storage of Allethrin, by J. B. Moore, McLaughlin, Gormley, King, Minneapolis; d) Biological Tests of Allethrin Without a Synergist, by K.
B. Nash, John Powell & Co., New York;
e) Biological Tests of Allethrin with a Synergist, by Howard Jones, asst. director in applied research, U. S. Industrial Chemicals, Inc., Baltimore; f) Summary of Previous Presentations, Speaker from USDA.
"New Aerosol Formulations," by R.
S. Fulton, U.S.D.A.; "Aerosol Cattle

Sprays," by Robert Nelson, U.S.D.A.;
"New Developments in Household Insecticides," symposium — Dr. A. C. Miller — moderator, Gulf Research Corp., Pittsburgh, Pa.; a) Lethane in Aerosols, by J. P. Nichols, Rohm & Haas Co., Philadelphia; b) Chlordane Aerosol Toxicity, by Dr. F. Heyrock; c) Chlordane for Control Subterranean Termites, by Dr. C. C. Compton, Julius Hyman & Company, Denver, d) "Lindane Aerosols." by R. O. Cowen, d) "Lindane Aerosols." by R. O. Cowen. ton, Julius Hyman & Company, Denver;
d) "Lindane Aerosols," by R. O. Cowen,
Standard Oil Co. of Ohio; e) "Synergist 264," by Dr. J. B. Moore, McLaughlin, Gormley, King; f) "Sulfoxade," by Dr. D. F. Starr, S. B. Penick
& Co., New York.

DISINFECTANT & SANITIZERS DIVISION

William X. Clark, Sterwin Chemicals, Inc., New York, Presiding

"Versene in Quaternary Compounds," Speaker from Bersworth Chemical Co., Framingham, Mass.; "Hypochlo-rites versus Quaternaries," by Dr. Vladimi Dvorkovitz, Laboratory Director. Diversey Corp., Chicago; "Detergents of Ethylene Oxide, Condensation Type and Mixtures Thereof," by Dimitry A. Schiraeff, General Dyestuff Corp., New

SOAP, DETERGENT AND SANITARY CHEMICAL DIVISION

H. W. Zussman, Presiding "Evaluation of Paint and Linoleum Cleaners," by J. C. Harris, in charge of Detergent Research, Monsanto Central Research Laboratories, Dayton, Ohio; "End Use Foam Testing," by J. G. Sinsheimer, Fuld Bros., Inc., Baltimore; "Recent Developments in Nonionic Surface Active Agents," by Dr. Martin J. Cross, General Dyestuff Corp., New York; "Sulfonation of Al-kyl Aromatics," by J. E. Kircher, director of sales, Sharples Chemical Co., Philadelphia; "Optical Bleaches in Soaps and Detergents," by Dr. Edwin Stearns, Calco Chemical Division. American Cyanamid Co., New York.

WAXES AND FLOOR FINISHERS DIVISION

M. J. Flanagan, Presiding "Release of Federal Specifications," by Dr. W. W. Walton, Bureau of Standards, Dept. of Commerce, Washington 25, D. C.; "Maintenance of Floors With Water Emulsion Paste Wax," by Joseph Green, Oil Specialties & Refining Brooklyn; "Maintenance of Floors With Resin Dressings," by Gerard De Nap-oli; "Testing of Wax Floors with Radioactive Isotopes," by Joseph J. Pescatore, U. S. Testing Co.

GROUP LUNCHEON "Success Story of Glass Wax," by August C. Ranaw, Campbell-Mithun Inc., Chicago.

GENERAL BUSINESS SESSION

C. L. Weirich, C. B. Dodgle, Westport,

Conn., Presiding
Report of Legislative Committee,
G. S. McInery, Charge, Boyle-Midway
Inc.; Report of Resolutions Committee; New Business; Unfinished Business.

Committee reports and unfinished business will be covered by the divisions at meetings on Tuesday afternoon.

Tuesday P.M. Cocktail Party Informal Dinner and Floor Show

YOU can **EASILY** make Top Quality **Disinfectants**

-for use in Restaurants, Hotels, Hospitals, Homes, Commercial Buildings and Industrial Plants.

Nopco's outstanding, quality emulsifiers for pine oil— Nopco* 1444 and Albasol* AR—enable you to compound disinfectants of high bactericidal efficiency in the simplest possible way.

No heat is required, no rosin, no caustic soda or other chemicals.

Simple hand mixing is all that is needed.

With either of these Nopco bases, you have only to add pine oil, stir (at room temperature) until a uniform mixture is obtained, and then add water. It's as easy as that. No special technical knowledge or equipment is necessary.

And the finished disinfectants are not only effective germ killers but, being brilliantly clear, are attention-getters that make powerful appeal at the point of sale.

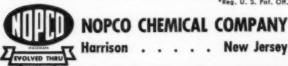
Nopco 1444—is a clear, light amber liquid base, designed to carry 4 parts of pine oil. Soluble pine oils prepared with this base are emulsifiable in either warm or cold water in all proportions. Phenol coefficients of 2, 3, 4, 5, and 5-plus are easily obtained.

Albasol AR—is a special highly concentrated emulsifier, somewhat darker than Nopco 1444. It possesses unusual carrying power for pine oil and blends readily to produce brilliantly clear disinfectants. Formulas giving phenol coefficients of 2, 3, 4 and 5 are easily compounded.

Profit by writing us today for full details about these exceptional Nopco bases that permit you to produce top quality disinfectants at low cost and in the simplest manner on record!

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Biological evaluation of agricultural and household insecticides

Evaluation of unknown compounds for insecticidal, fungicidal, and bactericidal properties

Phenol coefficient determinations

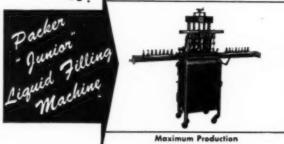
Chemical determination of insecticides

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Cleaning Supplies at Chicago Hotel Show

KLENZADE PRODUCTS, INC., Beloit, Wis., exhibited their complete line of sanitation chemicals for institutional use at the Midwest Hotel Show in Chicago, recently. Organic acid detergents which can be used with quaternaries for dish, silverware and glassware washing, either by hand or machine, were featured. Detergents for washing and sanitizing kitchen sinks, soda fountains, refrigerators, food grinders, slicers, shower stalls, etc., were also shown.

A detergent in brick form for machine dishwashing with an automatic dispenser was displayed and of particular interest was a new coffee urn cleaner which, it is claimed, leaves no film to build up inside and affect flavor. Disinfectants for use on food contact surfaces and DDT products for fly and roach control were also shown. T. D. Laughlin, senior food sanitarian, was in charge, assisted by W. J. Dixon, John McKillop and Robert J. Jeffers.

Wade, Wenger & Associates, Chicago, presented their "Cleanmaster" detergent for on location carpet cleaning, also products for mothproofing and fumigating in homes and institutions. Special attention was drawn to a series of spot cleaners to remove stains on chair backs.

The company, which was organized twenty years ago and incorporated in 1947, has recently organized a location cleaning service for hotels in addition to its home service, M. E. Wade, president, explained. Most re-

cent large job, he said, was the cleaning of 33 miles of carpets on floors at the Greenbrier Hotel, White Sulphur Springs, Va.

Guest size soaps for the hotel trade were shown by Lever Bros. Co. (Lux) and by Procter & Gamble Distributing Co. (Ivory and Camay). Sanitary maintenance supplies were shown by Krano Products Co., Chicago. Hild Floor Machine Co., Chicago, had a large display of their floor maintenance equipment and supplies as did, also, System Products Co., Chicago. A new self-wringing sponge rubber appliance for scrubbing floors applying wax, dusting, etc., was shown by H. & M. Sales Co., Chicago.

Cal-Spray Folder

A new folder giving complete details on the use of isotox-lindane insecticides for use in livestock barns, dairy barns, milk processing plants, etc., was issued recently by California Spray-Chemical Corp., Richmond, Calif. The booklet contains instructions on when and how to use isotox-lindane insecticides, and gives tables which show the recommended amounts of the material to use. The insecticides are formulated in 25 per cent isotox-lindane wettable powder and 20 per cent isotox-lindane liquid concentrate

forms for dilution with water. A one per cent isotox-lindane animal dust formulation is applied without dilution.

Woods New CSC Head

J. Albert Woods was elected president of Commercial Solvents Corp., New York, at a special meeting of the board April 12. He succeeds the late Henry E. Perry, who died March 15. Mr. Woods earlier had joined Commercial Solvents as a director, prior to which he was president of Wilson and Toomer Fertilizer

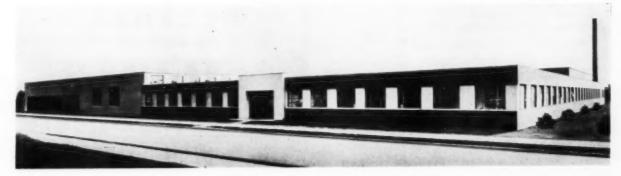
Chlordane Odor Neutralizer

A neutralizing odor that is claimed will eliminate effectively the objectionable character of chlordane was announced recently by Magnus, Mabee & Reynard, Inc., New York. Recommended proportion is one ounce to from six to eight gallons of chlordane. The odor is designated "Neutralizer DO No. 622, MM&R."

U.S.I. Insecticide Booklet

"Controlling Insects on the Dairy Farm" is the title of an eightpage folder issued recently by U.S. Industrial Chemicals, Inc., New York, on behalf of its "Pyrenone"-based dairy insecticides. The booklet is illustrated with scenes of dairy farm applications of insecticides, and features of the material are listed.

Boyle-Midway, Inc., New York, is now occupying its new Cranford, N. J., plant, where a complete line of household products are being manufactured. Constructed on 16 acres at South Avenue and Hale Street, the thoroughly modern plant was planned to house Eastern manufacturing facilities, offices, research and control laboratories and an extensive warehousing area. Executive offices continue at 22 E. 40th St., New York, The company also operates other manufacturing plants in Chicago, Chamblee (near Atlanta, Ga.). Los Angeles, Toronto. The new plant replaces the former Boyle-Midway factory located in Jersey City, N. J.



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WE SELL TO THE JOBBING TRADE ONLY

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Attaches to hard surface walls with or without screws.



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AASGP Names Committees

The following names of committee members for the Association of American Soap and Glycerine Producers for the coming year have been announced by the association president, Neil McElroy.

COMMITTEES FOR 1950 (First Named Chairman) Executive Committee

N. H. McElroy, Procter & Gamble Co. J. L. Brenn, Huntington Laboratories. J. O. Brownell, Lever Brothers Co. E. M. Finehout, Los Angeles Soap Co. E. H. Little, Colgate-Palmolive-Peet Co. E. A. Moss, Swift & Company.

Finance Committee

N. S. Dahl, John T. Stanley Company, J. O. Brownell, Lever Brothers Co. H. F. Elberfeld, Colgate-Palmolive-Peet Company.

Nominating Committee

E. W. Wilson, Armour & Company
H. Dock, M. Werk Company
E. M. Finehout, Los Angeles Soap Co.
E. H. Little, Colgate-Palmolive-Peet Co.

Cleanliness Promotion Committee

E. J. Sella, Great Stuff Products

G. A. Wrisley, Allen B. Wrisley Co. R. E. Healy, Colgate-Palmolive-Peet Company.

A. G. Peck, Peck's Products Company.

C. D. Poland, Poland Soap Works.M. J. Roche, Lever Brothers Company.W. G. Werner, Procter & Gamble Co.

Convention Committee

W. G. Werner, Procter & Gamble Co. M. L. Westering, Vice-Chairman, Swift & Co.

R. E. Healy, Colgate-Palmolive-Peet

A. Hersberger, Atlantic Refining Co.
I. P. MacNair, MacNair Dorland Co.
G. Perkins, Perkins Soap Company.
M. J. Roche, Lever Brothers Co.
A. W. Schubert, Emery Industries.

R. H. Young, Davies-Young Soap Co.

Freight and Transportation Committee
R. Crowley, Colgate-Palmolive-Peet Co.
T. P. Kenny, B. T. Babbitt Co.
W. Malone, Lever Brothers Company,
D. C. Phillips, Magnus Chemical Co.
C. L. Weirich, C. B. Dolge Company,
W. E. Willey, Procter & Gamble Co.

Public Relations Committee

W. G. Werner, Procter & Gamble Co. T. A. Gonser, Lever Brothers Company. Manning O'Connor, Colgate-Palmolive-Peet Co.

G. A. Wrisley, Allen B. Wrisley Co.

Statistics Committee

H. F. Elberfeld, Colgate-Palmolive-Peet Co.

S. Humphreys, Tennessee Soap Co. M. A. McManus, Lever Brothers Co. P. Neidig, Atlantic Refining Co. A. G. Peck, Peck's Products Co. K. Siddall, Procter & Gamble Co.

New Floor Wax Spec.

Issuance of a specification on water emulsion type floor wax, #784," dated March 28, 1950, was announced recently by the Federal Supply Service, General Services Administration, Washington, D. C. It supersedes 784, and complete details will appear in our June issue.

Leedsall Correction

In our March issue in a news item about the formation of Leedsall Chemical Co., 2330 Hollins St., Baltimore, we inadvertently gave the incorrect name of the company. Officers include: Max M. Kaufman, president; Irvin S. Kaufman, vice-president and treasurer and John C. Buttner, secretary.

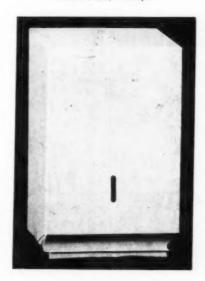
Pyrenone for Horse Flies

Investigation of "Pyrenone"type insecticide sprays reveals that control with these combinations of piperonyl butoxide and pyrethrins can be effectively extended against horseflies, according to a recent announcement of U. S. Industrial Chemicals, Inc., New York.

Chlordane for Fly Control

A bulletin, based on an official release of the U. S. Public Health Service, on chlordane for the use of fly control was issued recently by Velsicol Corp., Chicago.

One of a new line of paper dispensing cabinets to be shown for the first time at the National Sanitary Supply Assn. meeting by Dash Metal Products Co., Brooklyn.



Soap for N.Y. Schools

A "clean hands" program for New York public school children has been authorized recently by the appropriation of \$100,000. Soap and towels will be available in all schools before the end of June, according to C. J. Bensley, chairman of the Board of Educations committee on buildings and sites. Soap dispensers and electric hand driers will be installed also.

Talk on Detergent Evalution

"Evaluation of Detergents—A Study of Washing Performance of Some Surface Active Materials and Combined Detergent-Sanitizers" is the title of a paper delivered before the Detroit meeting of the American Chemical Society, April 18, by Francis I. Norris and C. C. Ruchhoft.

P & S Name Carsch

Gustav Carsch has been appointed recently as manager of the Chicago branch of Polak & Schwarz, New York. He has been with the firm for several years as a sales representative in the midwest territory.

Edward F. Davis Dies

Edward F. Davis, assistant general rural sales maanger of the J. R. Watkins Co., Winona, Minn., died Feb. 25.

White King Advertisement

A full-page two-color advertisement bearing the headline: "It's Against the Law to Say Soap . . . Unless There's Soap in the Package," appeared in the Los Angeles Times recently on behalf of "White King" soap. The advertisement says, "Possibly you are trying to make a soap substitute do the job, and maybe you're disappointed in the way your clothes look. Soap substitutes were introduced during the war when production of real soap was cut sharply, by government order. *** Make sure the word soap appears on the product you use. If it's not labeled soap, it can't be

"White King" is made by Los Angeles Soap Company.





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which economically makes fog out of insecticide and other liquids mechanically without the use of Heat or Steam!

Used by leading Corporations, Laboratories, Universities and P.C.O.'s for insect control and research.

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Fast colors for the New Synthetic Detergents in Red, Blue, Green, Amber and Yellow.

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Penn. State PCO Course

The fourth annual Pennsylvania Pest Control Operators' Conference and Short Course, held recently at Pennsylvania State College, State College, Pa., was attended by 33 operators. Speakers included Dr. Ralph Heal, technical director of the National Pest Control Operators' Association, who discussed fabric pests. Laboratory work on the identification and life history of the major fabric pests was conducted under the direction of Drs. N. D. Blackburn and C. W. Rutschky of the college's faculty. Commercial aspects of fabric pest control were covered by D. C. Kinnamon, Jr., of John Simmerman and Sons.

Rodent control was the topic of the second day of the conference. Drs. H. A. Merrill and E. M. Mills of the Fish and Wildlife Service spoke on the subject of rodent control, with empasis on the new rodenticides. Martin T. Meyer of Theodore Meyer Est., Philadelphia, presented a report on business practices among pest control operators, and presided at a round table discussion of problems of the industry on the final day of the session. Dr. E. H. Dusham spoke at the annual banquet, the final feature of the meeting.

The conference was arranged by Drs. H. W. Frings and D. E. H. Frear of the Departments of Zoology and Entomology and Agricultural and Biological Chemistry of the college, respectively. Members of the Pennsylvania Pest Control Operators' and the National Pest Control Operators' associations assisted.

Changes at Koppers

The appointment of H. R. Condon as vice-president and general manager of the wood preserving division of Koppers Co., Pittsburgh, was announced recently by General Brehon Somervell, president and newly elected chairman. Mr. Condon succeeds W. F. Munnikhuysen, who was recently appointed executive vice-president of the company.

Announced at the same time was the appointment of R. R. Holmes, assistant general manager of the company's tar products division, as a vice-president of the division.

The new board chairman succeeds J. P. Williams, Jr., former president, who retired.

CSA Fite Nite; Golf Dates

A "Fite-Nite" will be held by the Salesmen's Association of the American Chemical Industry at the Downtown Athletic Club, New York, May 23. Dinner will precede the bouts.

The following schedule of golf outings for the coming season has been announced by the organization: Tuesday, June 6, Nassau Country Club, Glen Cove, L. I., N. Y.; Tuesday, July 11, Bonnie Briar Country Club, Larchmont, N. Y.; Wednesday, August 16, Montclair Country Club, Montclair, N. Y.; Tuesday, Sept., 12,

Westchester Country Club, Rye, N. Y.

Ollie F. Minor, sales manager, New York Division, Shell Oil Co., discussed salesmanship at the April 13 luncheon meeting of the Chemical Salesmen's Association, held at the Hotel Roosevelt.

New Dow Fungicide

A new fungicide, 3-phenylsalicylate, for control of athlete's foot was announced recently by Dow Chemical Co., Midland, Mich. The chemical may be applied as a solution to treat shoe linings, and to canvas and cloth shoes, thus preventing infection of the shoe with athlete's foot fungi. Tests indicate that a treated canvas sample containing 2.6 per cent of copper 3-phenylsalicylate showed a spore count of less than 100 fifteen minutes after inoculation with one milliliter of a spore suspension of athlet's foot organism. Under the same conditions, an untreated canvas showed a spore count of 260,000.

The chemical is said to be permanent, imparts no odor to the liner or shoe, and had no irritant effects on the skin of 200 people tested for dermatological effects. The compound also eliminates mildew which normally accumulates on the inside of shoes stored in warm, humid areas.



AVERY S. HOYT

Avery S. Hoyt has been appointed chief of the Bureau of Entomology & Plant Quarantine, U.S.D.A., following the death, March 29th, of Dr. Percy N. Annand, who had been chief of the Bureau since 1941. Mr. Hoyt, a native of California, held numerous posts with the California State Dept. of Agriculture before joining the U.S.D.A. He served with the U.S.D.A. Plant Quarantine and Control Administration before that bureau was consolidated with the Bureau of Entomology. He has been associate chief of BEPQ since 1941.

A. F. Sievers Retires

Arthur F. Sievers, who did extensive research on the culture and analysis of plants producing insecticides, essential oils and related products, retired recently from the U. S. Department of Agriculture after 43 years of government service.

Miller Chem. Catalog

Miller Chemical Co., Omaha, recently issued a 76 page catalog and price list on its line of pesticides, soaps, allied chemicals and dispensing equipment.

Illinois Duster Catalog

Issuance of its price list and catalog was announced recently by Illinois Duster & Brush Co., Chicago. Reductions in the price of wool dusters and wool wall dusters are indicated in the list which is given on a net basis.

Floor Machine Migrs. Meet

The National Association of Floor Machinery Manufacturers held their annual meeting at the Hotel Stevens, Chicago, May 3.

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BOOTH 96

Bring your wax problems! We manufacture Water-Emulsion Paste Wax, Solvent Waxes, Pigment Waxes, Self-Polishing Waxes, and many others. Ask about KARE-33, the NEW WAY to KILL ROACHES AND ANTS and wax floors at the very same time!

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ALVIN J. COX, Ph.D.

Chemical Engineer and Chemist

(Formerly Director of Science, Government of the Philippine Islands; Retired Chief, Bureau of Chemistry, State of California Department of Agriculture.)

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Presses, 10, 12, 18, 24, 30 and
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Sales: Experienced sanitary products traveling sales manager wanted by leading manufacturer of floor products, equipment and other sanitary supplies so'd to institutional trade, located midwest. For purpose of hiring only experienced salesmen in the field. Full record, connections, references and other details. Strictly confidential. Address Box 185, c/o Soap.

Salesmen: New, revolutionary, non-competitive, patented maintenance chemical used by clubs, hotels, theaters, restaurants, institutions, etc. Consumer leads, and national publication support. Salary, plus commission and traveling expenses. Big repeat item. Good future. Write: P. O. Drawer 759, Treasurer, Miami Beach, Florida.

Experienced Chemist: With immediate formulae and know-how to set up and immediately manufacture complete line of sanitary maintenance chemicals, such as insecticides, deodorants, germicides, waxes, cleaners, etc. Must have manufacturing and factory managerial background and knowledge to accomplish research and development work for company's progressive growth. Salary commensurate with ability and experience. Address Box 188, c/o Soap.

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Salesman Wanted for prominent line of liquid soap dispensers for jobbing trade. Give full details in your first letter. Address Box 187, c/o Soap.

Soapmaker Wanted by old established firm in Pacific Northwest. Must have reference, Position steady. Box 195, c/o Soap.

Positions Open

Chemical Engineer: Twenty years' experience, engineering and production in soap and allied fields desires position of responsibility. Address Box 189, c/o Soap.

Chemical Engineer: With wide and varied plant design experience in soap, synthetics, fatty acids and glycerine desires permanent position or will consider limited engagement

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Sales Manager: With contacts from Denver East & Boston to Florida. Excellent record with three largest concerns also soap mfg. experience seeking manufacturer needing more business & manager with new discovery product on royalty basis. Address Box 191, c/o Soap.

Production Man: 4 years experience in liquid emulsions, can do some formulating. Operate plant from raw materials to finished product. No chemical research. Address Box 194 c/o Soap.

Salesman: Sold out my interest with one of the leading sanitary cleaning and janitorial supply houses on the west coast after 15 years association with the one company. Experienced in every phase of the sanitary supply business and hundreds of contacts with the trade. Proven record that I was top salesman in this line with successful experience in the employing and training of men. Seeking opening with established firm in executive sales or managerial capacity. Address Box 196, c/o Soap.

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Wanted: Complete soap or sanitary chemical plants. Also individual items such as crutchers, plodders, mills, mixers, pressers, dryers, filling equipment, etc. R. Gelb & Sons, Inc., State Highway No. 29, Union, N. J.

Will purchase Immediately: Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box 192, c/o Soap.

Wanted: Chemicals - Alkalies —Colors—Solvents—Drugs—Oils and Foots. Soaps—Other Supplies. Chemical Service Corp., 92-06 Beaver St., New York 5. Tel.: HAnover 2-6970.

For Sale

For Sale: All or part or lease, complete soap plant with tower, for chips-powder-bar-liquid, etc. Address Box 193, c o Soap.

For Sale: Illness forces sale of industrial c'eaning chemicals produced by leading manufacturersexcellent condition. Inventory value approx. \$15,000. Cash preferredterms with reputable firm. Chemway Co., 111 W. Main, Walla Walla, Wash.

For Sale: The new Janitizer Dispenser including patents, registered trade mark, Janitizer Liquid Formula, manufacturing dies and hundreds of accounts and inquiries. See our ad on page 142. If interested contact Central Distributors Co., Tyrone, Pa.

For Sale: Paste Soap Dispensers-heavy steel-nickel plated

-durable-practical sample on approval \$4.65. National Dispenser Company, 10210 LaSalle Avenue, Los Angeles 47, California.

For Sale: 2 Crutchers 36" dia. x 40" deep. Powder Mixers 800# & 1500#. Stokes & Smith G-I-D powder filler. Stainless steel tanks from 6 gal. to 3450 gal. Perry Equipment Corp., 1510 W. Thompson St., Phila. 21, Pa.

For Sale: J. H. Day Ribbon Mixer 290 gal. capacity, also size #24 giant kneading & mixing machine. Plant Equipment Co., Cincinnati 3, Ohio.

For Sale: Two 200 gallon full jacketed Dopp Kettles with type "L" Agitator. Also other chemical equipment. Allied Steel & Equipment Co., Dept. W., Chester, New Jersey.

For Sale: Allbright - Nell 4'x9' chilling rolls. Lehmann 4 roll W. C. 12"x36" steel mill. Houchin 8½"x16" 3 roll & 18"x30" 4 roll Granite Stone Mills. Anderson No. 1 Expellers. Jack. kettles & tanks, iron, copper, alum., stainless. Dry-ers vac & atmos. Jones automatic soap presses. Soap frames, Automatic soap chip dryer. Slabbers & cutting tables hand & power. Crutchers. Blanchard #14 soap powder mill. 6 knife chipper. Foot presses. Filter presses 12" to 42". Wrapping & sealing machines, Powder, paste & liquid mixers. Rotex sifters. Filling machines. Grinders. Hammer mills. Mikro pulverizers. Colloid mills. Three roll stee! mills, 3"x9", 9"x32", 12"x30" & 16"x40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Co., 90 West St., N. Y. 6, N. Y. WOrth 2-5745.

For Sale: 1 - Proctor & Schwartz 4-section Soap Chip Dry-

er, with 5 roll Houchin Cooling Rolls; 1-Pkge. Mach. Co. N-1 Laundry & Toilet Bar wrapping machine; 1—Houchin hand soap slabber; 1-3500 lb. vertical jacketed crutcher, m.d., 1-Houchin 4roll inclined Granite Mill, 18" x 30" rolls, pulley drive; 2-Jones vertical type B, toilet soap presses; 3— Houchin 3" soap strainers; 50-1200 lb. soap frames; 2-Sperry 36" x 36" recessed filter presses, 60 plates; 1-Dopp cast iron 600 gallon jacketed kettle; 1-Allbright-Nell 4' x 9' Chilling Roll. Only a partial list. Send us your inquiries. Consolidated Products Co., Inc., 15-21 Park Row, New York 7, N. Y., Barclay 7-0600. Cable address: Equipment, N. Y.

Relation of Insects...

(From Page 145)

almost 100 per cent in certain business districts. From 1916 to 1944 murine typhus was on the increase, except for a few years of recession. Since 1945 a sharp decrease in the number of cases has occurred. This decrease was coincident with the DDTdusting program, and there is good evidence that that program is largely responsible for it (U. S. Pub. Health Serv. 1949). Wiley (1948) states that there was a decline of 25.2 per cent in 1945 in the number of murine typhus cases in man in the dusted counties, a drop of 44.1 per cent in 1946, and a decrease of 56.4 per cent in the first half of 1947.

Floor Maintenance

(From Page 139)

already of the great strides being taken in the domestic field with the intro-

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Mikro 4TH, 2TH, 1SH and Bantam Pulverizers, Jay Bee Mills U1 and 3AT, Schutz-O'Neill, Williams. Stedman and Reitz Mills. Stokes, Baker-Perkins JNM and Readco, Day, Hottman Mixers, Laboratory Up to 3500 gallons, with and without Jackets.

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R. A. Jones Model E Automatic Soap Press, 1/2 to 41/2 oz. cakes.

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by John W. McCutcheon

(36 pages)

Reprints of the above article as it appears in current issues of Soap & Sanitary Chemicals are available from the author as a 36-page leatherette—covered booklet. The article consists of a review of the history, type and production of synthetics, their outlook and a list of over 700 trade name synthetic detergent and surface active products listed in alphabetical order. Each product is identified by manufacturer, class and formula, main uses, form, percent concentration, type and special explanatory remarks.

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John W. McCutcheon

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duction of new and improved floor machines, small rug cleaning and upholstery cleaning machines, and better vacuum cleaning equipment. Department sto:es, hardware shops and paint dealers, as well as appliance stores all over the U. S. have set up floor divisions where floor maintenance equipment, together with a wide variety of waxes, cleaners, soaps, and other floor maintenance accessories, are carried in stock. Magazine and newspaper editorials are constantly appearing, extolling the virtues of fine, clean and sanitary floors. The prospects of a greatly expanded household market for floor care products are excellent.

Standardization in many phases of floor maintenance practices is rapidly taking place. Greater co-operation between all manufacturers of floor coverings, materials and machines will lead to a healthier and more profitable volume of business for all of us in the floor maintenance industry.

Penn. PCO's Meet

The regular dinner meeting of the Eastern Pennsylvania Pest Control Association was held recently, at the Celebrity Room, Philadelphia. Dr. John B. Schmitt of Rutgers University gave a comprehensive talk on termites. A brief outline of the recent short course given at Penn State College was presented by Martin T. Meyer of Theo. Meyer Est., Philadelphia. A letter from Ernest Mills of the U. S. Fish & Wildlife Service inviting members to attend a Rodent Institute Course for Public Health Inspectors at Philadelphia was also read.

Merchandise Mart

(From Page 133)

the Court of St. James. From its inception the Mart gained recognition as the world's largest buying center. Approximately 1,209,000 separate items of merchandise are included in the wholesale lines permanently displayed there by more than 3,200 manufacturers or their sales agents.

Among the manufacturers of sanitary chemicals and equipment whose goods are listed in the 700-page directory of goods sold in the Merchandise Mart are S. C. Johnson &



New industrial type dispenser for "Sight Savers" lens tissues made by Dow Corning Corp., Midland, Mich. Refill packages available.

Son, Inc., Racine, Wis., and 10 other firms offering cleaning and polishing materials; National Aniline Div., Allied Chemical & Dye Corp., New York, detergents, disinfectants, deodorants and moth preventatives; Bostwick Laboratories, Inc., Bridgeport, Conn., and six other concerns offering insecticides, germicides, etc.; Deshler Broom Factory, Deshler, Nebr.; Anchor Brush Co. and Gulf & West Indies Co., New York (chamois and sponges).

Detergents in U. K.

(From Page 157)

agents should not be overlooked. The inclusion of traces of mineral oil, lanolin, wax and other emollients of a cosmetic character may be investigated, although too high a proportion of these would probably reduce the product's foaming capacity. The chief difficulties remain: controlled solubility, the attaining of a "soapy" feel, the selection of suitable builders, and the use of an effective binding agent.

Paste detergents have long found application in garages, factories, farms and workshops for the rapid removal of grease and dirt deposits from the hands. Though conventionally based on soap, they can also consist of synthetic detergents, extended with mildly alkaline fillers, glycerin or weak gum mucilage, kaolin or other pigment cleaners (including harsher abrasives such as tripoli), and a proportion of water.

Pool Sanitation Firm

Articles of incorporation for Swimming Pool Supplies, Inc., to handle chemicals used in swimming pool sanitation were filed recently with the office of secretary of state, Albany, N. Y. Capital stock was listed at 50 shares with no par value. Directors listed are: Adelaide F. Solomon and Edward Freundheim, both of Mount Vernon, N. Y., and Susan Solomon of White Plains, N. Y.

Buys American Products

Purchase of the trade marks, brand names, inventories, equipment and good will of American Products Co., Reidsville, N. C., was announced recently by Virginia Specialty Corp., Lynchburg, Va. The manufacture of the "Nu-Shine" line of shoe polishes and various waxes is continuing at Lynchburg, Va.

Rat Repellents

(From Page 151)

in the field of rat deterrents, there is much yet to be done. The problem is a difficult one. What appears to be of value and useful under one set of conditions often falls down under another.

There is also the problem of adaptation on the part of the animals, particularly to chemical repellent materials. This presents a serious challenge to the use of these where application is not made directly to food items. The cumulative effect of several animals as against the attack of a single individual likewise is an important consideration. The ultimate answer will have to be obtained under the exacting conditions presented by a host of varied field conditions.

Whereas it is realized that deterrents have their limitations in the reduction of damage by rats, this, however, should not lessen our zeal in the search for useful materials wherever they may have application.



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You've got the answer to practically EVERY washroom need when you sell the Mione line. And thanks to Mione's extremely liberal jobber discounts, you've got the answer to increased profits during 1950.

If your customers or prospects will have nothing but powdered hand cleaners in their washrooms, you can offer them a choice of 4 different Mione powders, and 3 different scrubbers. If they lean to liquid, you can't do better by them than sell them Mione Liquid Hand Soap.

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*Per-Mo Rat & Mice Liquid packed in 8 oz. bottles or in Gals.

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made with RED SQUILL (Fortified) packed in 4 oz., 16 oz. and in Bulk.

*Per-Mo Rat Paste

made with RED SQUILL (Fortified) packed in 4-8 and 16 oz. jars.

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Ease the road . . .

SALESMAN'S road can be pretty steep and bumpy at times. And nothing can make it rougher for your salesmen than to call on prospects unheralded and unknown. The unknown salesman of unknown products has two strikes on him before he goes to bat. But, if through advance advertising, for example, the buyer knows something about your products and your firm, the sales road is bound to be easier, smoother.

If you would ease the road for your salesmen in the field of soap and detergent products, cleansers, floor products, insecticides, disinfectants, janitor supplies, and allied specialties,—and help to keep it smooth for more effective selling,—we suggest that you consider regular advertising in

SOAP and Sanitary Chemicals

254 WEST 31st STREET

NEW YORK

Tale Ends

NYBODY interested in buying a nice Whiteface Hereford bull with blood as blue as indigo? T. V. Dubois, boss man of the Dubois soap outfit out in Cincinnati whose first love is Herefords and who slaves in the soap racket so that he can buy more and more of them for his hobby stock farm, will sell you one cheap. The price? Oh! Ten grand!

Stating that his moth crystals will repel numerous kinds of insects, a well-known insecticide manufacturer, we believe, may be sticking his neck out a triffe. Isn't this "repel" thing on the verboten list? Aren't "kill" and "control" the words? Isn't USDA likely to take umbrage to "repel" used under these conditions? For the right answer to all these questions, it gives free two packs bubble gum!!

Ernie Gillam, Fort Worth, Tex., soaper who specializes in verbal jousting with the "soap trust," is in the Texas newspapers again. This time, it's volley ball, — a game which you play by batting a small basketball back and forth across a high net until one side or the other drops dead from exhaustion. He is czar of a league down Texas way and is known so "the Connie Mack of volley ball." Leave it to Ernie to make the papers!

R. N. Cockburn & Co. of Glasgow, Scotland, are introducing tiny Soap pellets for economical travelers known as "Savonette" soap pills. They look like aspirintablets and obviate the need of travelers bearing the burden of an ordinary bar of toilet soap. That the idea should originate in Scotland is obviously and traditionally fitting.

Soviet Russia will produce 19% more soap in 1950 than last year, Tass news agency reports. Each year for the past twenty, it seems, these reports of large year-to-year soap production increases have come forth from Moscow. What this means in real output, — who knows? But, either their soap production was close to nothing twenty years ago or it must be about fifty pounds per capita today, — neither very likely. Maybe they're just kidding us again!

A box of soap powder was sold in Philadelphia for \$3,800! The sale was made by a dope peddler who represented it to be the real McCoy. But, it was just plain soap powder, so his victims screamed that they had been robbed. Philly dicks nabbed the peddler and tossed him in the klinck. Now we know why some legislators call for full formulas on soap packages. It's to protect the public against getting a box of heroin by mistake.



Please expect excitement when you use

A NORDA ORIGINAL

Your new odor's here. It's A NORDA ORIGINAL, ready for you to name it.

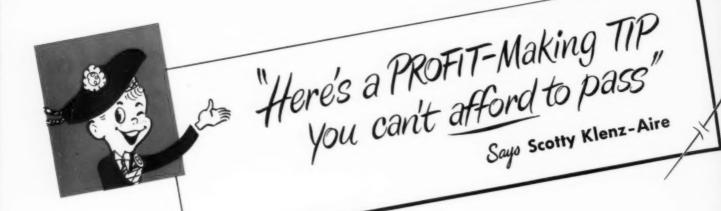
Use A NORDA ORIGINAL to start a line of products toward quick success. Every NORDA ORIGI-NAL has a modern, memorable bouquet—a spicy, lingering fragrance.

Plan a complete line – colognes, toilet waters, creams, perfumes, deodorants, lotions, soaps, lipsticks – with every item distinguished by A NORDA ORIGINAL.

Send for free samples of the smell that will sell your product. Just ask for A NORDA ORIGINAL. Come to Norda today.



Norda ESSENTIAL OIL AND CHEMICAL COMPANY, INC. 601 West 26th Street, New York 1, N. Y.



You can make a FINISHED DEODORANT SPRAY

for only 75¢ a gallon with KLENZ-AIRE DEODORANT OIL

IT'S AMAZING! IT'S ALMOST TOO GOOD TO BE TRUE!

Klenz-Aire Deodorant Oil-which we firmly believe is the finest, most economical Deodorant
Oil you could buy-combines with formaldehyde and water to make a milky emulsion spray that . . .

- will not break down or separate
- · costs only 75¢ a gallon (for the finished spray)

This wonderfully effective spray kills all tobacco smells, cooking odors, destroys odors in public rooms, theatres, kitchens, apartment houses, rest rooms, schools, hospitals, taverns . . . and leaves a pleasant, fresh after-scent that people like!

Klenz-Aire Deodorant Oil makes a truly all-purpose spray. It works in any type of dispenser, including the new self-spraying plastic bottles.

We'll be glad to send you generous samples of Klenz-Aire Deodorant Oils for your own experiments, or our chemists will work with you in developing a finished spray of your own. Why not write us today!

AROMATIC PRODUCTS, INC.

15 East 30 Street, New York

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ODORS AVAILABLE

- Apole Blossom
- · Bouque
- . Bouquet "C"
- Carnatio
- Clover
- Gardenia
- · Honeysuckle
- Josmin
- . . .
- . Mint
- Norcisse
- Neutro
- . New Mown Ho
- Oriental
- . Line Meedle
 - Rose
- Sandalwood
- Spice
- Sweet Pea
- Viole
- Wistonia

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